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PROGRESS OF EDUCATION IN THE CENTURY

BY
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AND
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PROGRESS OF EDUCATION IN THE CENTURY.

CHAPTER I.

GENERAL AWAKENING IN EDUCATION.

AMONG the many wonderful evolutions of the nineteenth century none are more remarkable, or more full of hope, than the universal interest in the extension of educational privileges to all classes of society, and the progressive reform made in teaching and training children. The century will be known as the child's century.

The "New Education" is really more of a revolution than an evolution. New organisation, new aims, new methods, new principles have been substituted for the old, where the "New Education" is understood. If all the work of all the great educators of the past were destroyed, all that is vital in modern education would be found in the writings of Pestalozzi, Froebel, Mann, and Barnard. Pestalozzi and Froebel revolutionized the aims, methods, and principles of education; Mann and Barnard gave the world America's most important contribution to civilisation,—a system of well organised schools conducted and maintained by the state.

The great educators who lived before the nine-

teenth century had made very important contributions to education. Comenius especially had visions of the underlying principles of the "New Education." But Pestalozzi and Froebel were the true reformers of method, and the revealers of broad and high ideals regarding the perfect evolution of the child. They gave the schools a new and greater function,—the development of human power, the training of human character, and not merely the story and culture of the human mind. They led the world to see the fallacy of the maxim, "Knowledge is power."

Knowledge becomes power when its acquisition aids in the development of man's executive tendency, when it is woven by self-activity into the individuality of men and women, and used by them as a means of revealing a greater self-hood. The being created in the image of God is the real power; knowledge is the material by which his mind is nourished, and his spiritual nature enriched. This ideal, so much grander and broader than the old ideal, necessarily led to the developments of the nineteenth century in educational aims and methods. Educators now fix their attention on the child more than on the knowledge he is to study, and, as a result, the new methods are processes of developing the child's physical, intellectual, and spiritual powers harmoniously, instead of merely storing and giving culture to his intellect. With aims of such a character it is perfectly natural that educators should rapidly become free from the conventionalities and narrowness of the past, and pass quickly from stage to stage in a progressive revelation of the great fundamental principles of teaching.

The new ideas of Pestalozzi and Froebel made it possible to have a science of education, and the bas-

ing of this science on the physical, intellectual, and spiritual powers of the children made it absolutely necessary to study the child carefully in order to become scientifically acquainted with his powers and with the methods and processes by which they can be developed. The results of this study have already led to more reasonable and more effective methods of teaching and training children and will undoubtedly lead to greater changes in the future.

The work accomplished by Mann and Barnard in providing a system of free, national schools was even more original than that accomplished by Pestalozzi and Froebel. Great results have already followed their radical reforms. These reforms like those of Pestalozzi and Froebel were based on a truer recognition of the child and his rights. The two great European reformers recognised the child as an individual with splendid powers to be developed, and they spent their lives in planning systems for the development of these powers. The two great American reformers recognised the child as an individual with rights, among them the right to be educated at the expense of the state, and they spent their lives in organising and establishing a system of free, national schools. From these four men the world received the vital principles, methods, and organisation of the schools at the close of the nineteenth century.

It is difficult to select the greatest among the many educational developments of the century, but the establishment of free, national schools must be regarded as one of the most important steps in the progress of the race. It extended the privileges of education to the children of all classes, and therefore did more than any other act or agency could have done to do away with the myriad evils of con-

ventional classification of the human family on the basis of rank or fortune. It was the most widely effective step in the overthrow of the vicious class system and in the promotion of the great principle of universal community among men. It lifted the children of the poor, and what had been arrogantly named "the lower classes" out of their worst conditions of misfortune by at least setting free their imprisoned intellectual and spiritual natures. It elevated the hitherto neglected children, and opened to their mental and spiritual lives the treasures of the past recorded in literature, music, and art by those who had been in advance of the race, and who had received most clearly new and more ennobling revelations relating to all that influences man's highest destiny. Its beneficent effects are only beginning to manifest themselves distinctly. As each generation becomes more fully and more truly educated it will be more capable of improving and administering the greatest national function, the true education of the race. The system will grow broader, and more comprehensive, and more thorough through the coming centuries, but its foundations were well and truly laid in the nineteenth century by Mann and Barnard.

In the department of method, the most important advance of the century was the founding of the kindergarten. The fundamental principles of the kindergarten have been recognised as the true foundation principles of education, and have been gradually adopted in all progressive schools, colleges, and universities. The law of self-activity, when fully understood, has been adopted in all educational institutions, as the test law in deciding the value of methods of teaching. Since its revelation by Froebel, teachers have passed through several progressive

stages in their evolution towards its complete comprehension, and its intelligent practice.

In the early part of the century teachers taught and pupils were supposed to listen. If they did not do so they were punished. If they did listen, while their teachers talked and told them facts or explained principles, and had memories capable of retaining the matter stored in them, they were approved as good scholars, and went out from colleges and universities to be surpassed in the practical work of life by the men who had received no collegiate or university education. They were trained to be mere receivers and reproducers of knowledge, and, therefore, their executive power was dwarfed by lack of opportunity for its exercise. The only executive training afforded by schools, colleges, and universities was the training of the playground.

Gradually through the century the pupil has been emancipated. He has become more than a vessel into which facts and principles are poured by his teacher. Slowly, but surely, teachers are "learning to teach less that pupils may learn more," and not merely learn more, but develop more powers of intellect and character.

Teaching has really passed through six stages in the evolution of the nineteenth century from the "telling" stage to the stage of self-activity of the pupil.

At first the receptive powers only of the children were trained; then the receptive and reflective powers; and finally the receptive, reflective, and executive powers received attention. At first each department of the human power was made merely passive and afterwards it was trained by its own activity, so that educational progress may be divided into six advancing stages; passive receptivity, active recep-

tivity, passive reflection, active reflection, passive or responsive activity, and active executive work, or true self-activity.

In the first stage the child receives the knowledge communicated to it by the teacher; in the second stage, the pupil is trained to get knowledge independently. The observing powers were developed as the supreme aim of education. Then it was learned that knowledge was useful only so far as it was intelligently used, and it was deemed advisable to train the reflective powers as well as the receptive powers. Children were trained in the process of thinking as well as in observing; but again educators at first made the mistake of leaving the pupil passive instead of training him to be active in his intellectual work. Men "allowed other people's thoughts to run through the minds of children," and called it thinking. However, in time the child was encouraged to do independent thinking, as well as independent investigation.

The greatest advance in teaching was made when teachers realised that education was very imperfect, so long as the child was not trained to be executive along the lines of its special individual power or selfhood. The great majority of men and women have been submissive followers of a few leaders in every department of their life work; in social life, in religion, and in politics. Without the training of his executive power a child becomes a poor agent for good in any sphere. Thousands of men have good power to gain knowledge from books, and men, and things; and excellent power to reason in regard to the knowledge they have gained, who, nevertheless, are of little use to themselves, their fellow-men, or God. They are called unpractical; they are negative, not positive; they lack force, and energy, and definiteness of purpose; they have not a true faith in

their own self-hood; they do not recognise their own best power; they are shut into themselves; they fail to influence society, or the church, or their national life for good, as they should do; they leave little evidence behind them, when they die, that they have ever lived. They were dwarfed by the educational system which even yet, in many places, is satisfied with giving children well-trained powers to receive knowledge and good ability to think; with making a child a well-equipped, receptive and reflective being.

Such training, while it is undoubtedly vastly better than the training given in the early part of the century, still leaves untrained the real self-hood or individuality of the child. This was Froebel's greatest revelation of method; the law of self-activity as the only basis for the complete development of all the powers of the human being.

But even when men conceived the idea that the child should be trained to be executive, they made him responsively active, instead of independently active. The old ideal of passive receptivity blinded educators at all stages of progressive evolution. Even at the close of the nineteenth century there are a great many teachers who do not comprehend the fundamental principles of self-activity. They still do the chief part of the work of the child's education. The child's activity in every department of his training is recognised now, but his activity is commonly only responsive activity—and not true self-activity. He performs the operations assigned him by his teacher, in accordance with the plans of his teacher, and under the supervision and direction of his teacher.

In the highest stage of educational development the child is self-active. His self-hood originates as well as executes. He is made more than an intelli-

gent operator, who is capable of carrying out the plans of others. He is developed in his real individuality, and becomes capable of adding his part to the sum of human knowledge and power.

The complete educational ideal at the close of the nineteenth century included the training of the receptive and reflective powers, but it involved the training of these powers as essential elements in the training of the executive powers. It is only when they are so trained that all subordinate powers reach their best development. It is a universal law, that all the subordinate steps in a progressive sequence of power receive their fullest development of power when called into requisition as necessary parts of a complete process. The subordinate elements reach their highest evolution in extent and definiteness when they are called into action as parts of the complete unity. They cannot attain their best growth when their development is the direct purpose and only manifest aim of education.

So the methods of teaching have passed during the nineteenth century from telling to guiding on the part of the teacher, and from passivity as a listener to self-activity in investigation and in operation, as one of the results of the organisation of the kindergarten system. In chemistry or physics or biology, for instance, in colleges and universities, professors formerly delivered learned lectures to be memorised, whether they were understood or not; then they advanced to a higher stage in which they performed experiments, while their students observed; but finally the era has arrived when each student makes his own investigations, performs his own experiments, and so far as possible prepares his own specimens, and makes his own drawings and reports. The teacher is an experienced guide whose wisdom reveals the

order with which investigation should be made and experiments performed by the students, but the students are self-active, and by their own self-activity they learn more, their learning becomes more definitely a part of their own life-power, and they acquire the tendency and the ability to do their part independently in the work of the world.

The spread of the ideal, that the child should be trained in his operative power, has led to the almost universal adoption of manual training as a part of popular education in Europe and America. At first it was introduced for economic reasons; to qualify the child to make a living, to increase his value to his family and his nation as a producer of wealth, and give respectability to work by freeing it from drudgery. At the end of the century men have learned to value manual training as an important educational agency for the development of brain power, for the coördination of the brain and hand, for the culture of the observant powers, for the development of the power of definite, purposeful thought, for making the child a practical, self-active, independent, original being, and for training his moral nature by preserving his creatively operative tendency, and stimulating him to productive effort. While recognising the many important economic results of manual training, it is now made a part of regular school work because of its direct, and indirect influence in the physical, mental, and moral development of children.

Children have a natural tendency to work with the material things by which they are surrounded. They use sand, and stones, and bricks, and clay, and wood to make, and build, and represent in visible form, the plans and ideals that are revealed to them. They are happiest when constructing or

moulding their material environment into new forms. This tendency is not given to children merely to keep them occupied happily, although pleasant occupation means a great deal in a child's true development. The child transforms his material environment in order to develop his brain, and train his observant, his reflective, and his directive or operative powers and to lead him to the greatest of all conceptions, that he has power to coöperate with God in improving all things. The revelation of power to transform his material environment will in due time enlarge into the conception of power to transform intellectual and spiritual conditions, and improve and elevate the industrial and social conditions of humanity.

On this natural tendency to transform much of the best development of the race depends. Old systems of education based on the ideal that to educate meant to communicate knowledge, paid no attention to the nurture and cultivation of this tendency, and so it is gradually passing out of the character of many of those who were said to be most thoroughly educated. Since educators have learned to consider education as the development of human power in harmony with its best culture and enrichment, and as a necessary part of his highest culture and enrichment, they have learned that the preservation and development of the tendency to transform and the power of transformation are two of the most fundamental aims of true education.

Manual training is really a systematic, methodical continuation in the school of the voluntary work done by the child in his expressive play before he goes to school. It is not a mere human device or process to produce certain results in power; it is a wise use of the universal, characteristic activity of

childhood for the defining of an operative hand, a directing brain, and a hopeful, improving, progressive, executive character. It has been adopted in nearly all civilised countries, and its value will increase rapidly, as it is more universally recognised as an educative rather than an economic process. Its extensive introduction is one of the great educational movements of the nineteenth century.

Industrial schools have made a rapid growth during the nineteenth century. The term "industrial" has been applied to institutions for teaching trades, and to schools in which neglected children are kept at the expense of the state, and in which they receive education and training in some industrial employment. The aim of "Trade Schools" is to give expert mechanical training in certain occupations. They are intended to take the place of and to be an improvement on a system of apprenticing children for a term of years to learn a trade. The "Trade Schools," properly so-called, may be regarded as economic institutions quite as much as educational or scholastic institutions.

Industrial schools are commonly regarded as schools in which children are kept at the expense of the community and educated in scholastic learning and in industrial occupations. The state in such schools not only fulfils its general function of giving a free education to children, but it assumes the duty of guardianship of children whose parents are dead, or criminal, or dissipated, in order to save them from conditions of evil which would cause them to be brought up in ignorance and crime.

The state in such schools, having assumed the duty of guardianship provides for the needs of the children in homes built and maintained at public expense, and takes such steps as are found necessary

to give the pupils a good education and a training in some trade or occupation by which they may earn a respectable living, when they are old enough to leave school, or be qualified for efficient service in good families, if it is found best to place them in private homes.

The movement, which has been so general in civilised countries during the nineteenth century in favour of the children of dissolute and cruel parents, is a part of a general movement in favour of all suffering, neglected and defective children. In the large cities of Europe there are now hundreds of thousands of children who are receiving a thorough education in splendid public schools, who would not have received any scholastic training at all, if they had been born in the middle of the century. There are magnificent institutions in all civilised countries for teaching and training the blind, the deaf and the feeble-minded,—unfortunate classes, who were left destitute of intellectual and spiritual training until recent times. The wave of true sympathy and reverence for childhood has taken a practical form and the world has recognised the right of all children to an education suited to their conditions. This general movement in favour of all classes of neglected and defective children is the best outcome of the Christian philanthropy of the nineteenth century and is the best answer to those who object to the direction and control of educational institutions by the State. Since the adoption of State or National School systems the advancement made in providing educational facilities for the children of the poor, and for the neglected, the orphan, the blind, the deaf, and the weak-minded, has been rapid and definite.

The clearer revelation of the dignity of childhood, the reverence to which it is justly entitled, and the

rights that should be accorded to it, have entirely changed the attitude of adulthood to childhood. Sympathetic and considerate adulthood has voluntarily given up many of the barbarous practices which inflicted so much cruelty upon children and did so much to destroy their natural good tendencies, make them dull, selfish, sensual, and unsympathetic, and inconsiderate parents or guardians have been forced to be at least fairly respectful to children by the laws of civilised nations. One of the most glorious achievements of the nineteenth century is the awakening of a true spirit of child reverence, and the passing of laws for the protection of children in their physical, intellectual, and moral rights.

The last half of the nineteenth century will be notable for the revolution effected in the discipline, management, and training of children. Men and women, even among the highest classes, have been fined and indeed imprisoned by the laws of Christian lands during the last years of the century which has just closed for punishing children in ways that were conscientiously regarded by earnest Christian men and women as essential to the performance of their solemn duties to their children at the middle of the century. The new revelation in regard to the true method of training children has been far-reaching in its influence. The development of the ideal of child perfection has led naturally to movements in favour of all classes of human beings and even of animals who were formerly subjected to abuse or cruelty because of their subordination. The evolution of the conception of child-freedom has widened the range of moral vision, and all forms of tyranny based on ownership or superiority, real or assumed, have been successfully attacked, as the ideal of true freedom has grown clearer.

✱ The ideal of Christian civilisation in the middle of the nineteenth century permitted and approved the beating of children and apprentices and young servants, as the only way to keep them in the paths of rectitude. The most advanced Christian philanthropy of the highest civilization whipped the patients in insane asylums, and poor, unfortunate, imbecile children as a solemn duty. The training of a child was understood to mean keeping him from doing wrong. Children, the weak-minded, and the insane were regarded as lacking in wisdom or in any other power to control themselves, and keep them from evil, so they were whipped, often with terrible cruelty, in order that they might learn to avoid certain practices of which their superiors disapproved. They avoided these practices, at any rate when their superiors were present, through their instinctive dread of suffering. Fear was the supreme restraining force of humanity, and restraint was the only method known to prevent evil-doing. External, coercive forces were indeed relied upon as the highest processes by which children could be induced either to do right or avoid wrong.

The progressive revelations of the nineteenth century have entirely changed the philosophy and are rapidly changing the practices of child-training. Teachers and parents now aim to develop self-control instead of external control; they train the child by evolution from within instead of by activity or passivity compelled by authority from without. Refraining from evil as a result of the exercise of the authority of parent or teacher gives the child no moral force. It does not develop the habit of doing right or even of avoiding wrong. It develops the habit of passive submission—often of sullen, resentful submission to a superior will—and this habit

is the logical basis of all human slavery. It is the habit of subordination, the habit of following, the habit of intellectual and moral slavery. It dwarfs independence, and individuality, and originality, and the consciousness of true freedom, and true responsibility. It makes the race negative instead of positive, and robs men of their greatest likeness to God, in whose image they were created.

The century has made no more notable advance than the reform in child-training from restraint and coercion to interested and co-operative self-activity.

One of the most important results of the true recognition of the child's rights and of a widespread reverence for the child as the centre of all industrial, social, and spiritual evolution, is the remarkable awakening in regard to child study during the latter part of the nineteenth century. The originator of the movement was Froebel, the great founder of the kindergarten. For more than fifty years he studied childhood systematically and scientifically. He taught the world to recognise the child as greater than the knowledge to be communicated to him, and made it clear that child-development is of much greater importance than mind-storing. Men do not value learning less, but they value power as greater than culture, as the agency that adds real value to culture, and they are now studying the child himself with ardent enthusiasm to find out the processes by which his mind may be stored and enriched without dwarfing or destroying his individual executive power.

There is great hope in this new study for education and social progress. The most advanced educators of Europe and America are faithfully studying the child and comparing the results of their investigations in order to lay the foundations for

thoroughly logical and scientific systems of psychology and pedagogy. Already this most interesting of all studies, the study of the child, has led to a general consensus of opinion among educational leaders, that old methods of teaching and training must be abandoned, and that the aims and processes of education in primary schools must be changed in nearly every respect.

One of the direct results of child study has been the coördination of the home and the school for united study of the child, and coöperative efforts to secure the highest results in child-development. This movement has only begun, but already it has reached such proportions, as to justify the statement, that it is the greatest educational work of the present time, and that it will become the firmest basis for the educational evolution of the twentieth century.

Since the World's Congress of Educators at Chicago in 1893, hundreds of local, and state, and national organisations have been formed by parents in co-operation with teachers to study the child, and learn how to promote his physical, intellectual, and spiritual development. These organisations will ultimately be formed in connection with every church as a most important department of church work, and when the Church, the Home, and the School work in harmony along truly progressive lines for the highest development of the child, civilisation will begin to advance at a more rapid rate.

The recognition of the fact that education is a science based on the study of the fundamental principles of psychology and the laws of the natural evolution of the powers of the child has led to the establishment of normal schools for the training of teachers in the philosophy and the art of true teaching.

The training of teachers for the intelligent practice of their profession, and the conscious use of true pedagogical principles is one of the notable features of the educational development of the nineteenth century. So long as the popular belief accepted learning alone as a qualification for the position of a teacher, true progress in education was necessarily slow. One of the most effective steps in the whole history of educational advancement was the recognition by the state in civilised countries of its duty to prohibit untrained men and women from teaching in public schools and to provide normal schools for the thorough training of those who are to teach in them. This important step was essential when the state assumed the duty of supervising and directing public education.

For many years it was deemed sufficient to train the teachers of the schools for younger children, but the close of the century found a progressive movement in favour of requiring a thorough training for the men and women in high schools, colleges, and universities. A degree from the university is no longer regarded as a guarantee of power to combine the processes of mind culture and character development. Teaching is now recognised as a profession requiring as careful and as thorough a training as medicine, or law, or theology for its efficient practice.

One of the great aids in the general awakening of intelligent interest in education, and in the dissemination of higher ideals and correct methods in education, has been the publication of educational journals and magazines. Educational books have increased a thousandfold during the century, and periodical educational literature is one of its distinctive evolutions.

Physical education has received a great deal of in-

telligent consideration during the last quarter of the century. This was a natural result of the recognition of the fact that the communication of knowledge is only a small part of a complete education. The development of human power is the supreme aim, and the three departments of the child's power, physical, intellectual, and moral now receive systematic attention. It is generally agreed that these three departments of power must be trained as a unity in order that each department may reach its best condition of development and that the individual may be most thoroughly qualified for the performance of his duty as an individual and as a member of the community.

Intelligent teachers now understand that they weaken human power, when they train one department of a child's power at the expense of the others. The schools were dominated by the ideal of knowledge-giving till the nineteenth century, and they were sources of physical deterioration as a necessary consequence of one-sided training. It was an epoch in the history of the race, when the universities in the last quarter of the century began to appoint professors of physical culture for the development of the bodily powers of their students. The time cannot be long delayed when physical development will be taken into consideration in the granting of university degrees. Every element that enters into a man's qualification for effective life-work along productive lines should receive training in educational institutions, and should be considered in its full relative value in making promotions from school to school, and in the final graduation rank with which a man is turned out to begin his life-work.

One of the most important educational movements of the nineteenth century was the admission of girls

and women to equal rights in regard to education in public schools, colleges, and universities. The desirability of giving girls any education beyond a limited training to qualify for home life was a debatable question at the beginning of the century, but at its close they had equal consideration with boys in all progressive educational institutions. Woman herself has now the right to decide her educational course, and she has proved her ability to take high rank with her brothers in school and university work. The granting of educational rights in the highest degree to one-half the human race is surely one of the most momentous steps in the progress of civilisation.

Another great educational development of the latter part of the nineteenth century was the awakening in regard to the systematic culture of the race after graduation from school or university. The old ideal assumed that education was completed in school or university. In reality the truest education only begins when we leave the scholastic institution from which we graduate. Several important and far-reaching movements have been organised during the last quarter of the century to induce the study of post-graduate courses systematically and definitely. The greatest of these movements is the "Chautauqua Literary and Scientific Circle," organised by Bishop Vincent, which provides popular courses in all departments of general culture, so arranged that they may be read by even the busiest people. From this organisation have come various university extension movements, and modifications of university courses for occasional students.

The nineteenth century saw great development in agricultural colleges, schools of domestic economy and domestic science, and in other departments of technical and scientific education. These forms of

education have been found essential in qualifying the race for more definite, and more effectively productive work in the various departments of human labour. They have also done much to make labour pleasant and interesting, and to give constructive work its true place and dignity.

The study of art and music in schools has become practically universal in public schools during the latter part of the century. Art was at first taught in schools on account of its practical value in increasing the power of artisans in all departments of life-work, but both subjects are now taught because of their high educational value. They have a direct influence for good on the high and broad development of character, and they aid in qualifying children to understand and interpret the greatest works of the master minds of the past. All the revelations that have been made to the race by the prophet souls of the past, have been recorded even in literature, or art, or music, and one of the clearest duties of the school is to give the children the fullest possible power to interpret these revelations.

Sunday schools form a great educational force, and their extension and development were notable features of the educational evolution of the nineteenth century. Improved classification, the establishment of normal classes for Sunday School teachers, the adoption of a uniform series of lessons, and the publication of many excellent teaching guides dealing directly with the Sunday School lessons, have systematised and improved the work of Sunday schools, and made them definite agencies in human development.

The tendency to co-operation and the co-ordination of effort which has been such a marked feature of the last quarter of the century manifested itself in

the organisation of teachers for the explanation of improved methods of teaching, the consideration of the best methods of organising, classifying, and managing schools, and the discussion of the fundamental laws of pedagogy and psychology at institutes and conventions. Organised at first by local bodies of teachers in small municipal districts, they have extended their influence and area from town to county, state, national, and even international proportions, till in 1893 the World's Congress of Educators was held in Chicago. These conventions have had a marked influence in defining and broadening educational aims, and in diffusing new ideals and methods, and they must always continue to be the most potent agencies in the elevation of the teaching profession.

CHAPTER II.

ENGLAND AND WALES.

Primary Education.—The history of education in England exhibits three characteristics of the national genius. The English temper is reverent of the past. Education had its beginnings in the church; it must never be wholly lost to the church. The state has not presumed to interfere in education; it must be chary of interference now. This conservative temper delights in patching up a system or institution and dearly loves a compromise. In fine, while few countries illustrate better than England the persistence of growth, in no country is that growth a slower or surer evolution of the national life.

In the second place, the national temper and government have long been aristocratic. The nobles and the church wrested the Magna Charta from John, the aristocracy and the bishops achieved the bloodless revolution of 1688, while the great Whig families ruled despotically both church and state under the Georges. It was not, in fact, until the fourth decade of the eighteenth century that the centre of political influence shifted to the middle classes, and not until the last quarter of the century that England became a true democracy. Meanwhile, within itself the church still retains much of its aristocratic temper. Its authority issues from the throne and court, not "from the springs of national life." And the relation of this aristocratic temper in state and

church to education was, too long, best expressed in the half-indignant inquiry,—“why should we let down a ladder that the people may climb up and dispossess both us and our children?”

In the third place, the national genius is prosaic and practical. It turns away from the theorist and the system-maker. It approaches social and political problems without comprehensive views or fundamental principles. It meets the needs of the hour with the suggestions of the hour. Its reforming creed is the creed of the business-mind,—a minimum of change with a minimum of disturbance and a minimum of expense.

✓ Prior to the Renaissance the clergy were the teachers and defined the courses of study; the monasteries were the schools; and the sons of the ruling classes, the pupils. With the Renaissance Latin and Greek became the secular basis of the new courses of study, and Free Grammar schools, open to the poor as well as to the rich, replaced the monasteries. Most significant of all, the control of education passed from the clergy to the congregation, where the priest must recognise the interest, if not the authority, of the laity.

Grammar schools and a few endowed schools were created by the Tudors and early Stuarts, but between 1650 and 1800 a strange lethargy fell upon secondary education in England. Favoritism and extravagance dissipated the endowments. Many Grammar schools in small towns disappeared before the steady movement of the better classes towards the large centres. The schools that remained, though founded originally for the poor, were gradually restricted by expanding fees, to the sons of the very wealthy.

Between 1600 and 1750 the condition of the

poorer classes was pitiable. The Renaissance failed in its effort to give them Free Grammar schools. They were neglected by Tudors and Stuarts, despite the pleadings of Latimer, Milton, and Locke. Apprenticeship-laws may have forced upon them the training required of good workmen, but the seven years of apprenticeship could not evolve good citizens. Even during the first half of the eighteenth century the efforts in behalf of the education of the masses were isolated and ineffective. Parochial schools increased in numbers very slowly. Charity schools, whatsoever the type, were not more than 2,000 in number. The Society for Promoting Christian Knowledge among the poor, organised in 1698, was as yet unnoticed in 1750. In short, the rural peasantry were left without moral or religious training of any sort, and the masses of the industrial centres were "ignorant and brutal to a degree which it is hard to conceive."

After the middle of the century, however, great movements began to change the face of England. Steam-engines and spinning machines, canals and highways, new methods in mining and agriculture, heralded an era of marvelous industrial expansion. The Whig oligarchy did not long survive the withdrawal of the press censorship, and journals and pamphlets and great public meetings with a remarkable spread of general intelligence followed closely in the wake of the freedom of the press. The Wesleyan Revival, in throwing into the ecclesiastical arena a new and powerful body, "broke the lethargy of the church," and gave to the English world a new piety and a new philanthropic energy. These great movements, springing, unlike the Renaissance, from the masses themselves, developed a new social creed, —the creed of "the greatest good for the greatest

number." From this new social creed issued, says the historian Green, "the steady attempt which has never ceased from that day to this to remedy the guilt, the ignorance, the physical suffering, the social degradation of the profligate and poor."

It was to this new social creed, then, that England owed all early efforts to educate the masses. Popular education now appealed to philosophers and reformers. Malthus protested against the national disgrace of inadequate instruction. Adam Smith enunciated his belief in state control of primary education. Lancaster and Bell opened the new century with the first practical proposals for a national system. Private-Venture and Dames' schools increased in rural and village districts with great rapidity. Sunday schools, organized by Raikes in 1785 to remove the godlessness and ignorance of the masses, were 7,000 in number in 1800 with 800,000 children in attendance. The state itself, in repeated inquiries into the condition of the factory apprentices, evinced a new interest in education, and in its factory legislation hastened the disappearance of the apprentice-idea before a timidly-developing national system of primary instruction.

In the problem of national education the religious difficulty was present from the start. The Church, exclusive or indifferent, was slow to hear the new cry of the masses for the schoolmaster. It was not sure that intelligence should be universal. In 1795 Bishop Horsley "did not know what the mass of the people in any country had to do with the laws but obey them." And it was not indisposed to believe that ignorance was a social necessity. "To make society happy," its leaders said, "and people easy under the meanest circumstances, it is requisite that great numbers of them should be ignorant as

well as poor." If in the end the Church did join in the cry for the schoolmaster, it was with the intention of controlling that schoolmaster. Education must be the handmaid of religion. The child is to be taught in order that he may read the Bible and the formularies of the Church. The purpose of all educational agencies was to Christianise; it was but an incident that they also helped to educate. So it was that charity and parochial schools, Sunday schools, and schools of the Society for Promoting Christian Knowledge were under the exclusive control of the Church.

But the Church was not content with supremacy over the secular powers. With a tenacity born of its aristocratic traditions it clung to its supremacy over rival churches. To this supremacy,—so hostile to the sense of independence in the Nonconformist bodies,—can be traced the irritation, and rivalries, and the paralysis of effort that have marked the history of English education for the last century. To this supremacy also it was in some sense due that for years after the opening of the century, "while Scotland boasted its parish schools, and New England its common schools, and while the Revolution made popular education universal on the continent, the greatest of English statesmen dare not propose a national system for England." It was while thinking of these claims of supremacy that the historian could say even within the last half-century,—“England alone appears to have misunderstood the genius of Protestantism. With the wealthiest and most enlightened aristocracy, the richest and most influential church, and the most enterprising middle class, her lower orders are, as a mass, more ignorant and less civilised than those of any other large Protestant country in Europe.”

It is not difficult then to understand the Church's hostility to Whitbread's Education Bill of 1807. The bill would create parish schools for the poor, to be controlled by the vestries and maintained out of parish rates. The curricula of these schools should not include religious dogma. The Church, however, claimed that such an application of parish rates would introduce a dangerous secular factor, and that such universal secular instruction would lead the labourer "to despise his lot, read bad books, and imbibe bad doctrine." The bill was defeated. —

In this same spirit the Church seized upon and directed the Bell-Lancaster movement. Despite their bitter disputes these men were revolutionising English methods and giving a noble impetus to popular instruction. Bell's plans provided for sectarian instruction, and the Church soon rallied to his side. It opened parish schools for the poor and placed them in Bell's charge. In 1811, as a protest against the non-sectarian Lancasterian schools, it organised the National Society for Promoting the Education of the Poor and, under Bell's guidance, transferred to this society such schools as had already been organised or should be organised. The curriculum of these schools was astonishingly meagre—Bible-reading, the catechism, and certain industrial arts. The method of instruction was simultaneous; monitors and pupils learned at the same time and from the same lesson. The teachers were, of necessity, unsatisfactory,—“drunkards, the shipwrecks of other scenes in life, the refuse of society.” Even the buildings of the Society were not ambitious—“a barn furnishes no bad model and a good one may easily be converted into a school.”

Lancaster's enthusiasm and his dreams of universal instruction won him the sympathy of Romilly,

Brougham, and the friends of state education, while his advocacy of religious instruction without sectarian bias drew the Nonconformists to his side. Both these parties united in 1814 to organise, in emulation of the National Society, the less influential but no less progressive British and Foreign School Society.

With the close of the Napoleonic war in 1815, English minds turned toward domestic problems. But all demands for educational reform, coming while the shadow of the great Revolution still lay upon ruling classes and Church, were met by abortive inquiries. With great eloquence and perseverance, if with little tact, Brougham led the demand for a national system. His Committee of Inquiry into the education of London's poor (1815) recommended state aid for new school buildings and the alienation of existing endowments for their maintenance. No action was taken. The revelations of this Committee assisted Brougham in obtaining in 1818 a Committee of Inquiry into Charities for the Poor throughout England, but the arrogance of his manner and the scarcely concealed socialism of his speeches so frightened the ruling classes that this Commission, though reappointed annually until 1837, was utterly barren in good works. Willing to subordinate any principle to his desire to teach the masses, Brougham brought forward his Education Bill of 1820. In providing for the maintenance of schools out of parish rates, for local control by the vestries, and for approval of both teacher and studies by the rector, this bill was the means of clearly defining the great issue between Church and Nonconformists. The latter saw in the new schoolmaster a lay parson and in the local rates a partial endowment of the parish. In the bitter resentment

that resulted Brougham lost the support of both Non-conformists and educational reformers and the Bill was defeated.

England was now agitated by great religious, political, and industrial problems,—the problems of the Irish Church, of the franchise, of factory labour, of the slave trade, of the corn duties. The spirit of reform that strove to solve these problems was the spirit of reform that was solving the problem of general enlightenment. It was an age in which cheap literature, journals, pamphlets, penny magazines, lectures, and mechanics' institutes appealed to the lower classes, and social clubs, debating societies, reading circles, and encyclopædias enlarged the intellectual sympathies of the middle and higher classes. Noble leaders now appeared—men great in the history of the intellectual progress of the masses—Birkbeck, Whately, Wyse, Hallam, Althorp, Mill, of the new century.

The same spirit turned to meet the problem of national education. The state now recognised its obligation to instruct its masters, the people. But by what means should it instruct? Parish rates and local responsibility would mean Church control, and all advocates of a national system, as well as all Nonconformists, rejected that. State control and state maintenance implied a secular system, and all creeds rejected that. Private munificence might provide a means, but private munificence was limited and precarious.

Out of these differences came the inevitable compromise. In 1833, without legislation, the government quietly appropriated £20,000 to be distributed by the Treasury Board in grants-in-aid to school buildings of the National, and British and Foreign School Societies. Beyond the stipulation that these

Societies should provide at least one-half the cost of the buildings, no conditions were attached to the grants. Little opposition was offered to the repetition of the appropriation between 1832 and 1838, if we except Cobbett's petulant remonstrance, "it would increase the number of schoolmasters and mistresses, that new race of idlers." 18282

The Treasury Board, it was soon evident, was too cumbrous a machine for the distribution of the grants. It lacked expert assistance and organisation. But the country was not yet ready for a national Board of Education, whose creation would arouse the jealousy and opposition of the churches. In perplexity the government again took refuge in a compromise, and, without legislative action, created in 1839 the Committee of Council on Education.

This Committee, with members chosen from the Privy Council and with the Lord President of the Council as chairman, was authorised to distribute such grants as might be appropriated annually for education. The appropriation should include the moneys paid such officers and inspectors as the Committee might need, the grants for new schools of the two Societies, and the grants for such new schools outside the Societies as would accept a Conscience Clause. But the Committee now attached new conditions to these grants. The Society or the local managers must provide one-half the cost of the new building as heretofore, but that building in its general character must comply with certain rules of the Committee as certified to by the Committee's inspectors. Moreover, the Committee must be permitted, at any time, to seek information by special inquiry throughout the schools, and to organise schools for the training of teachers. Although financial needs forced the Societies, outwardly, to accept this Com

mittee, at heart they were suspicious of it, and saw in it the thin edge of the wedge of national and secular instruction. One of its first acts did not tend to remove the suspicion.

On the advice of its secretary, Dr. Kay-Shuttleworth, the Committee decided to organise Training Colleges after the Irish model. Religion, so far as it should form a part of the daily instruction by the professors in these colleges, was to be non-sectarian, and only so far as special clergymen arranged for and conducted the instruction was it to be sectarian. Both Societies recognised in these Training Colleges the logical beginnings of a state system, and both Societies were opposed to state interference, especially in religious instruction. The opposition of the National Society was particularly bitter, in view of the Church's claim to the exclusive right to train teachers. Frightened by the outcry against its proposals, the Committee abandoned all thought of a non-sectarian state training system, and distributed its special appropriation between the two Societies as grants-in-aid to establish Training Colleges which should be subject to the Committee's inspection. In 1841 the National Society opened St. Mark's Training College in Chelsea, and in 1844 it assumed control of Dr. Kay-Shuttleworth's school at Battersea. In 1842 the British and Foreign School Society established its first Training School in Borough Road.

The success of the Church in this struggle convinced the Committee that in future reforms it must recognise the religious basis of education. This conviction explains the Committee's compromise in the matter of inspection. By the famous "Concordat" of 1840 the inspectors whom the Committee should appoint to inspect the schools of the National So-

ciety were to be approved by the Church, and among their special duties was to be the inspection of religious teaching. Some years later the same privilege was granted to the British and Foreign Schools Society.

The Committee's generous support of the Training Colleges, and its careful instructions to the inspectors show its interest in teachers and its conviction of the need of trained teachers. The monitorial system had been tried and found wanting. It was cheap, but ruinous to monitors and pupils alike. Apart from the monitors, the teachers, as described by Macaulay, were "discarded servants and ruined tradesmen who cannot do a sum of three, who would not be able to write a common letter, who do not know whether the earth is a cube or a sphere, and cannot tell whether Jerusalem is in Asia or America, whom no gentleman would trust with the key of his cellar, and no tradesman would send of a message."

Dr. Kay-Shuttleworth saw in the pupil-teacher system of Holland a splendid substitute for the monitorial system, and urged its introduction into England. In 1846-7 the Committee provided for the registration of pupil-teachers in approved schools, outlined their five years' course of training, their annual examination and inspection, traced their graduation into Training Colleges through the Queen's Scholarship examinations, and their final return to the elementary schools as duly certificated teachers. Moreover, the Committee made annual grants to pupil-teachers and to teachers in charge of pupil-teachers, and provided not only Queen's Scholarships, but maintenance-grants during the Training College course. The significance of this financial aid, made more evident the same year by

the pension-grant for teachers, lay in the appearance of a new form of grant—the maintenance-grant—and the payment of this grant direct to the teacher as a servant of the state. The enlarged jurisdiction of the Committee's inspectors emphasised this new relation between state and teacher, and sent the committee's stimulating influence throughout the various educational spheres and associations.

Turning for a moment from questions of school buildings and Training Colleges, the Committee strove in 1853 to improve the school attendance by special or capitation grants, and in 1856 to remove a weakness in its own organisation by accepting a vice-president who should also sit in the Commons.

The first period of experiments and compromises was now rapidly closing. The country wished to know what had been done in education, and what remained to be done. To answer these questions and to solve the problem of "a sound and cheap elementary education" was the purpose of the Newcastle Commission of 1858.

On the financial side this Commission found that one-fourth of the school expenditure of the country was met by the state grant, one-fourth to three-fifths by the school fees, and the balance by private subscriptions. It found further that the average salary of the teachers was pitifully low (£95 for males, £62 for females), and the average of school fees excessively high. It insisted upon the necessity of private subscriptions, and thus indirectly upon the necessity of the voluntary school system.

As regards attendance, the Commission found that of the school population of 2,500,000 only 1,675,000 were enrolled in any kind of school, and of these probably one-half were trained in Private-Venture schools. Of those enrolled in the state-aided schools,

seventy-five per cent. were to be found in the schools of the National Society, ten per cent. in the schools of the British and Foreign School Society, and the remainder in the Roman Catholic and Wesleyan schools. The ratio of attendance to total population had improved from one in seventeen and one-half in 1803 to one in seven and seven-tenths in 1858, but withal the attendance was exceedingly irregular and short-lived.

The Commission emphasised the need of generous school accommodation, of careful inspection, and particularly of better teaching. The pupil-teacher system had replaced the monitorial system so recently as to scarcely affect the general character of the teaching. Maurice could still assert that "any-one is thought good enough for a teacher," and Arnold could still complain bitterly that teachers in Voluntary schools are "without culture or ideas." Outside the pale of the Voluntary schools the Commission turned towards the Private-Venture schools, hundreds of which were infant-schools kept by the "aged and helpless," or wretched nurseries where children "tumbled over one another like dogs in a kennel." Most of these Private-Venture classes met in "barns, outhouses, or deserted cabins." The teachers were the paupers, the crippled, the consumptives, of the community. "One," said the Commission, "was a young man, very pale and sickly in appearance, who expressed a desire to have an arithmetic book and a grammar for his own improvement. Another was a poor widow of seventy, who complained of her inability to buy meat and without meat her strength fails. . . . She is weary of life and hopes that her time on earth will not be long."

In closing, the Commission offered certain recom-

mentations. Voluntary schools must persist for financial as well as pedagogical, and—alas!—political reasons. State-inspection was increasingly necessary, but state-control was still inadvisable. In fact, so fearful was the Commission of the dangers of state interference that it would not recommend the abolition of school fees or the enforcement of attendance, but it did recommend the cancellation of the financial obligations between teachers and the state in the pupil-teacher grants and in the pensions.

For the poorer schools, financial assistance should be larger; in all schools the attendance should be more regular and of longer duration. Schools should be more numerous; salaries more generous; teaching better. For the first, let County Boards of Education levy county rates; for the rest—and here comes the Commission's most significant recommendation—let recourse be had to inspection, individual examination, and payment-by-results.

Vice-President Lowe embodied the Committee's suggestions, so far as he deemed wise, in the Revised Code of 1861. This Code pre-supposed the necessity of Voluntary schools and cancelled the financial obligations between teachers and state. It did not authorise county rates for local support, but it offered relief from financial burdens, as it thought to offer relief from other existing evils, in a new form of grant. This grant, while assuming a general efficiency in school equipment and work, was based particularly upon individual inspection and examination in reading, writing, and arithmetic.

For the moment the unfortunate effect of this results-grant was lost sight of in the new life it gave teachers, managers, and pupils. The attendance improved, teachers were better paid and became more industrious, the weaker students were not neglected,

and education was cheapened. But gradually the many evils inherent in the new method came to the surface, and for thirty years, despite discussions and reforms, worked their will on English education.

These evils did not consist simply in perverting the inspectors from their true duties, or in driving managers into pitiable shifts in their greed of gain, or in turning pupils into instruments of profit, or even in making anxious and precarious the lives and livings of the teachers. They tended to reduce school work to a mechanical drill, barren of human sympathy and intelligence. With work "trained to a minimum" the abler students were neglected, quality was despised, and a lifeless uniformity was apparent everywhere. Above all they consisted in introducing a wrong motive. The mercenary spirit seized upon the schools of the country. It made greed of gain the test of effort. History, grammar and geography were neglected in favour of the profit-bearing reading, writing, and arithmetic. Later years added other subjects, but only the fittest for grant-bearing purposes survived. The same spirit farmed out schools to teachers, forced students into examinations in defiance of the laws of health, developed such a sentiment that "failure caused not regret but indignation at the child," and reduced the intellectual aspects of education "to a grand game to beat the state."

But these reforms of 1861 did not satisfy the English world. The new political economy was pointing out the vital significance of education to national defence, the new sociology was proving the interdependence of ignorance and crime, the new industrialism was insisting upon the need of an alert, resourceful, and educated industrial class. The Paris Exposition of 1867, in emphasising the striking relation

between intellectual and mechanical progress, drove home this last need.

To these general issues were now added issues more pertinent to England and more practical. The Reform Bill of 1867, in throwing the weight of the masses into the scale, altered the educational problem. It heralded the great age of reforming liberalism which exalted the "swinish multitude" into fellow-Englishmen, and offered those fellow-Englishmen the best that English minds could devise. This new liberalism swelled the cry for a national system of education, and saw in the expanding wealth of the country a means of organising that system. The reports of the school inspectors, especially that of Mr. Fitch in 1869, revealed the more practical issues of the educational problem. The existing system was wholly inadequate. Despite the rapid increase in the state grant to one-third of the total school expenditure, many Voluntary schools were wretchedly poor. School accommodations had doubled since 1859, but 1,500,000 of the school population were not enrolled in any school, and more than 500,000 were enrolled in Private-Venture schools. Moreover, the attendance, especially in the rural and industrial centres, was extremely irregular and the school-period exceedingly brief. Few children attended school beyond ten years of age, and fewer still completed the "standards."

The Education Bill of 1870 reflected the changed conditions of the preceding forty years. Before 1833 the two great Societies controlled exclusively the primary education of England. Between 1833 and 1870 these Societies still controlled primary education, but with the help of maintenance-grants from the crown and under increasing restrictions as to the distribution of those grants. The time had now come

when these restrictions, while leaving all initiative with the local managers, must practically transfer the directive authority to the state. The bill accepted Voluntary schools as permanent parts of a national system. Each vestry or local council was required to report to the Department of Education upon the school accommodation of the Voluntary schools of its district, and the Societies were to be given six months in which to remove, with state loans if necessary, any inadequacies. If the Societies failed to do this, the state should interfere and direct the organisation of a School Board. The School Board, chosen triennially by the burgesses and ratepayers, had full rating powers over the district and was authorised to apply for building loans from the state. Failing to meet the school needs of the district, the School Board might be superseded by a second Board, under the direct control of the Department of Education.

The Department's authority in the local districts was confined in a general way to a definition of the character of the school building, of the courses of study, of the limits of the fees, and of the qualifications of the teachers, and for the right to exercise this authority the crown offered annual maintenance-grants on the basis laid down in 1861. In the great domain beyond this field of action and even in details within it, the local managers and the School Boards held undisputed sway. The Act made an effort to solve the problem of regular attendance, at least so far as concerned the School Boards. It provided that by special by-law the Boards might enforce attendance between the ages of five and twelve upon all children who had not completed the course through the primary standards. The Department felt that gratuitous instruction was a necessary pre-

liminary to compulsory instruction, but in the presence of Voluntary schools it dared not go farther than fix a maximum fee for the Board schools and provide for exemption to indigent children at the option of the Boards.

Great care was shown in the treatment of the problem of religious instruction. The law enforced a Conscience Clause upon the Voluntary schools, and, in the case of the Board schools, added to the Conscience Clause a prohibition of any "religious formula distinctive of any particular denomination." With the provision that no grant should be made for religious instruction, and that inspectors should not supervise such instruction, the terms of the Concordat of 1840 were abrogated, and the Crown resumed the duty of appointing all inspectors.

In the evolution of a national system this Bill was a splendid step in advance. It created a local rating authority and defined by statute the powers of the central authority. It made provision for adequate school accommodation, and, to a certain extent, for free and compulsory instruction. But, instead of removing, it accentuated religious differences. In insisting upon the Conscience Clause it embittered the Church, and in permitting the Boards to pay the fees of indigent pupils, in the Voluntary schools, it alienated the Nonconformists and the friends of a national system. It wedded England to denominationalism in education. After 1870, even more than before 1870, the schools became the "battlefields of warring churches and wrangling sects."

In their forced competition with the Board schools the Voluntary schools increased rapidly in numbers and expenditure between 1870 and 1880. Private munificence, exhausted by the great efforts of the Societies, or grown prudent in the presence of a suc-

cessful local-rating system, did not keep pace with this growth. The financial distress of the church managers forced the Education Department to increase the standard school grant from 15s. per pupil in 1870 to 17s. 6d. in 1876. But the distress persisted and its removal became a problem of party politics. At last, in the Voluntary Schools Act of 1897, the Conservative government offered special grants to the pupils of Voluntary schools, and, to assist in the distribution of these grants, Voluntary schools were permitted to organise into associations, generally with the diocese as a unit. To a large extent this favour towards Voluntary schools was offset by the Necessitous School Boards Act of 1897, which made compensatory grants to poorer School Boards, so that the report of 1899, which shows that seventy-nine and seven-tenths per cent. of the annual expenditure of the Voluntary schools, and fifty-four per cent. of the expenditure of the Board schools were derived from state grants, is a measure not so much of the partiality of the state as of the precariousness of private munificence.

The problem involved in the precariousness and inadequacy of the revenues of the Voluntary schools still pressed for solution at the close of the century. The Voluntary system was deemed a necessity, but all measures of relief had hitherto been "doles which keep the schools going a little longer but do not grapple with the difficulty that there are in England two classes of schools doing the same work for the nation and subject to the same inspection, of which one dips deeply into the public purse and the other is in dire straits to make both ends meet."

On its legislative side the progress of primary education during the last thirty years has consisted in revisions in the Codes or Minutes of the Committee

of Council and amendments in the details of the Act of 1870. One series of such revisions or amendments has had to do with school attendance and fees. Compulsion is foreign to the English temper, and the unwillingness of the School Boards to formulate the required by-laws rendered inoperative the compulsory-attendance clauses of the Bill of 1870. The amendment of 1876 stated in definite terms the duty of parents with regard to attendance. In no case should children under ten years of age take employment, and only when they possessed certificates of proficiency might they take it between ten and fourteen. To enforce these rules the Borough Councils and Poor Law Guardians were to organize attendance-committees in districts not served by School Boards. It was not, however, until 1880 that Vice-President Mundella so altered the Act as to make obligatory the enactment of compulsory by-laws by both attendance-committees and School Boards. The agitation for a prolongation of the school-life of the child resulted in 1893 in raising the exemption age to eleven, and in 1899 to twelve, while Gorst's Attendance Act of 1900 and the Pit-Boy Act emphasise the desire to enforce attendance and prevent the employment of children. In 1899 the average attendance had become eighty-two per cent. of the enrolled attendance, and the enrolled attendance had grown from 1,693,059 in 1870 to 5,672,403. The Commission of 1886 urged the difficulty of enforcing attendance so long as instruction was not free. In 1891 the state-grant to Voluntary and Board schools was increased by 10s. per pupil, and this additional grant was to be accepted in lieu of fees to that amount hitherto exacted by the school managers. In its practical results this grant has made primary instruction free.

Another series of changes had to do with the question of payment-by-results. Recognising early the evil effects of these grants, the Minutes of 1867 drew attention to the neglect of certain subjects and certain advanced students, and provided for special aid for schools unsuccessful under the grants-in-aid system. Sandon's Code of 1875 reclassified the grant-subjects as *standard* subjects which should include the indispensable rudiments, as *class* subjects which should include grammar, geography, and elementary science, and *specific* subjects such as the languages, advanced mathematics, and science. The obligatory subjects included the standard subjects and one class subject. Grants for standard and specific subjects were based upon individual examinations, those for class subjects upon a class examination. The Code of 1882, in reducing grants to infant-classes to the capitation basis, removed another evil effect of these grants. The Commission of 1886, while it recognised the unfortunate effects of the system, was undecided as to a substitute. On the whole it thought that emphasis on the moral and religious side of the school course would remove the one great evil of barren intellectualism, and for the rest it held with Lowe that "if the system was not efficient it was economical, and if it was not economical it was efficient." The Code of 1890, however, met the undue strain of the system by providing physical exercises. It supplemented the markedly literary character of the studies by drawing, elementary science, and manual training, and it strove more and more to make class-examinations the basis of the grants. Supplementing still further the literary side, the Code of 1895 made object-lessons and suitable occupations obligatory, and added cottage gardening and practical horticulture to the specific subjects. Various Codes since 1895 have

given large attention to this manual side of the course.

But the country was not yet satisfied. The grant-system still unduly emphasised unimportant subjects, still unduly penalised weaker schools, still destroyed—by fostering mercenary motives—the freedom of the local managers, and still honoured scholarship to the neglect of character. The age called for more physical training, more handwork, less specialisation and better co-ordination. To meet this the Code of 1900 established block-grants, which, while assuming the general efficiency of the school under inspection, were to be based solely upon attendance. With this Code disappeared the examinations and payment-by-results, and reappeared a large measure of local freedom in the selection and co-ordination of courses.

The residential Training Colleges, now sixty-two in number, have developed slowly during the last fifty years. They are still controlled by the Churches or other voluntary agencies, with state-inspection, and state-grants amounting to two-thirds of their revenue. The two years' courses of study, at first limited practically to reading, writing, and arithmetic, have gradually expanded to include many of the subjects of the examinations of the Universities—and, in fact, to be accepted in lieu of certain of such examinations. In recent years the residential type of Training College has been supplemented by the Day Training College in connection with a University. All Training Colleges are supplied largely by pupil-teachers through the Scholarship examinations.

The pupil-teacher system created a corps of teachers in sympathy with the social ranks which they afterwards taught; it provided these trained teachers

when Training Colleges were too few in number to train them; it was cheap. The special Commission of 1898 recognised these facts, but still found the system imperfect. The academic training was inadequate, especially in poorer districts. The pupil-teachers sometimes came from homes with few books or other evidences of culture, and in poorer districts they were only too frequently compelled to discharge all the duties of an adult teacher. Since 1898 the Codes have striven to remove these defects, by more careful selection of pupils, teachers, and schools, and by more stringent regulations as to academic and professional training.

Defects in the pupil-teacher system bid us look for defects in the teaching force in general. Scarcely twenty-five per cent. of the teachers are males, and the tendency to increase the number of female teachers grows more marked yearly. This defect, in itself not so serious, becomes grave when added to the fact that the increase consists largely of youthful female teachers licensed without professional qualifications. In fact, despite bitter protests, scarcely more than forty-two per cent. of the primary teachers of England have received professional training. In contrast to this, the lot of the teachers has improved. Salaries have steadily increased, the average of males to \$659.00 in 1899, and of females to \$411.00. Provision has recently been made for pensions, and the century closes with the assurance that the law will soon give the teacher greater permanence in tenure of position.

The inspectorial system has developed apace. With the abolition of payment-by-results the duties of inspectors have been confined to reports and recommendations to the Department, and to counsel to the

teacher. Generally speaking, the inspectors are scholarly men, and have taken a good place at the university. The staff now consists of twelve chief inspectors, one hundred and seven inspectors, about forty-five sub-inspectors, and one hundred and fifty-two assistants, with a corps of special inspectors for such subjects as needlework, music, cookery, etc.

Night schools, though favoured by the factory districts, grew slowly between 1839 and 1860. In 1861 they were given the benefits of the new grant-system and were placed in charge of the regular day teachers. After 1870, despite the expansion of curriculum and reorganisation of the age limits, they began to fail. The Commission of 1886, recognising that the day schools removed all need of night training in elementary subjects, recommended that night schools be allowed to develop a curriculum suited to local needs. The Code of 1890 withdrew the obligation to teach the elementary subjects. The Code of 1893 committed the night schools wholly to the control of the local managers, withdrew all conditions as to age and courses of study and suggested a training in technical rather than literary subjects. Meanwhile the payment-by-results and examinations have disappeared, and the night schools, as continuation schools, have passed into the region of secondary education.

Technical instruction proper lies outside the pale of primary instruction, but its influence on primary education in the form of manual training should not be overlooked. Reference has already been made to the efforts of the Codes since 1890 to redress the bookish character of the primary courses. The Science and Art Department, with its special grants, did much to assist these efforts, and to-day one is startled by the prominence given to the sense-training sub-

jects in the primary Codes of England. This revolution in the courses of study has introduced the problems of the co-ordination of the manual with the literary sides of primary instruction, and of co-ordination of manual with later technical training of the secondary courses.

Secondary Education.—The history of secondary education in England reveals the national temper even more faithfully than the history of elementary education. It is a record of ancient forms, of vested rights, and of robust individualism in persistent struggle with official inquiries, legislative compromises, and the common-sense demand for organisation and uniformity.

During the last half of the eighteenth century, residence schools of the proprietary type increased rapidly in numbers. But they did not improve in character. In buildings and equipment, and in fees their proprietors "bought in the cheapest market and sold in the dearest." Apart from an occasional effort to imitate the classical training of the great Public Schools, their curricula were as meagre as those of the Dames' Schools. The teachers were the Squeerses of Dickens' romances, or, as the ushers of Goldsmith's days, "the butts of the schools." In fine these schools repeated, and with the larger opportunities of residence-life, intensified the evils of the Private-Venture schools.

Nor did the great Public Schools and the Grammar Schools improve much. The revenues from their endowments were often misapplied. The public had not yet learned to interfere with the extravagance, the favoritism, and the vicious patronage in their administration. "The buildings were often uninhabitable and the food execrable." The curricula recalled the Tudor days. Arithmetic, "a thing of

shreds," represented mathematics and science. Latin of the formal type, construing, parsing, scanning, filled out the linguistic side of the instruction. The teachers measured up to their opportunities. A few were broken professional men or scholars; the vast majority were young clergymen without parishes. And the discipline was of a kind with the schools. Dr. Johnson commended above all things the "canning" performances in his old Grammar School at Lichfield. Dr. Keate, an Eton head early in the nineteenth century, flogged fourscore boys in succession, while Charterhouse boys petitioned against the abolition of flogging on the ground that "fines are ungentlemanly." But despite all this, these schools continued to do one thing well. In unexcelled school games, in vigorous discipline, and in meagre but effective school instruction they trained the strong-bodied, self-controlled, clear-headed leaders of men. They continued to supply English public life with its Cannings and its Wellingtons.

Reference has been made elsewhere to the social and industrial movements of the early part of the nineteenth century. These movements exercised a direct and powerful influence upon all forms of education. In the sphere of secondary instruction they created new schools and gave a new spirit to the old schools. The middle classes now began to move upwards into the more commanding social life of the higher classes. They assumed public duties. They entered the civil service at home or abroad and became officers in the army and navy. To train these classes new schools were needed, and between 1825 and 1850 Cheltenham, Marlborough, Lancing and Rossall schools and King's and University Colleges, London, were created. As population and wealth increased, private and proprietary schools, and other

institutions of a less ambitious type, grew rapidly in numbers. With new industrial needs the great commercial centres, such as London, Manchester, Birmingham, Bristol, Leeds, and Liverpool, took the first timid steps towards technical instruction in guild or city classes for older boys. And all these new schools or classes were the product of a democratic age. They were less expensive and less exclusive than the old schools, more practical in aim and more elastic in organisation.

But more important far than the new schools was the new spirit imparted to secondary education by these great movements. This spirit is seen best in the work of Thomas Arnold. As head of Rugby between 1828 and 1842 Arnold revolutionised secondary education in England. He retained old forms and traditions. His teachers were not scholars; he would not abandon the monitorial system; he flogged; his courses of study were linguistic and classical. But into these old forms and traditions he breathed a new spirit. Above all things else his teachers must be gentlemen and Christians. To be monitor or "fag" meant to be self-disciplined. He flogged only for moral offences. He taught his classics in the vernacular, and he read into them the literature and history of the ancient world. He added to these classics the modern languages, modern history, and even mathematics. And in all the motions of the school the supreme thing was character, the supreme purpose to banish brutality, irreverence, injustice, and cowardice from the lives of Englishmen. Arnold taught classics not to make the scholar but to train the English gentleman. It is the recognition of this purpose, and its development by such great headmasters as Moberly, Vaughan, Wordsworth, and Thring, that

constitute the chief glory of secondary instruction in England.

Two forces struggled for the mastery in secondary education during the second half of the century. The one force was the exclusive temper of the middle and higher classes as reflected in the conservatism, disorganisation, and sturdy individualism of English institutions. The other force was the new democracy, progressive, orderly, and economical. Its temper was reflected in its demands for advanced instruction for all, for a less expensive, more uniform, more modern instruction, and ultimately for its natural corollary, state-control of that instruction. The struggle between these forces has been long and at times uninteresting, but the result has never been in doubt. Actions and reactions, official inquiries, and legislative compromises do not conceal the fact that in one direction or another, under one agency or another, secondary instruction has been steadily assuming the form and order of a state-organised interest.

The Science and Art Department has been one of these organising agencies. The demands of the new industrialism induced the government in 1836 to offer through the Board of Trade a special grant to a school of design at Somerset House. In 1841 grants were offered to several schools of design in the manufacturing centres. In 1852, as an indirect result of the great Exhibition of the previous year, the Department of Practical Art was organised as a sub-division of the Board of Trade, and in 1853 a Science sub-division was added to the Art sub-division. Three years later, these Science and Art sub-divisions, now fully organised as the Science and Art Department, were transferred from the Board of Trade to the Committee of the Privy Council on Education, to be

directed by the president and vice-president of such committee, but not by the committee itself. During the same decade the Department took up its quarters at South Kensington, made its first isolated efforts to create science schools, sent out its first inspectors to art schools, held its first examinations in science for both pupils and teachers, and organised its first grant-scheme. Assuming proper buildings and teachers, this grant-scheme demanded satisfactory instruction and examination in specified subjects. After 1860 this scheme was narrowed into payment-by-results so far as mathematics and science were concerned, and, later, so far as art subjects also were concerned. About 1865 the wild chase for these grants began in earnest. In 1868 evening classes received them. The new elementary schools joined the chase after 1870. When the School Boards recognised the need of systematic instruction in science for their older students, and began to develop organised science schools, these too shared in the new grants. Moved by their poverty and attracted by the ease with which grants could be earned, many endowed schools applied for the same recognition as the organised science schools.

Until 1890 the payment-by-results scheme expanded, and dominated the work of the Science and Art Department. After 1890 the reaction came. Individual examination gave way before class examination, and class examination before oral examination and inspection. In 1893 attendance-grants appeared and all art schools and elementary science schools were subjected to regular inspection, and in 1895 the grant-basis for science schools, apart from attendance and inspection, was restricted to compulsory subjects. In 1897 payment-by-results, in so far as the Science and Art Department was concerned, was finally re-

placed by regular inspection. Meanwhile in 1895 commercial and literary subjects were added to mathematics, science, and art in the list of subjects recognised by the Department, and in 1897 domestic science and manual training became compulsory in all science schools.

Here the effort to organise secondary education under the agency of the Science and Art Department practically ended. The Department had never presumed to exercise a large influence in the local control of the schools it aided. Art schools, and science classes were directed by special local committees; School Boards administered the elementary and science schools, and the evening schools; and boards of managers controlled the endowed schools. Its influence as the central authority was restricted by the expanding sphere of action of the Education Department, and by the arbitrary powers of the Charity Commissioners. A law of 1897 still further weakened the local authority of the Department by delegating its grant-distributing powers to such county or borough councils or committees thereof, as would assume the responsibility of directing the science and art teaching of their jurisdictions in accordance with the regulations of the Department. These regulations, moreover, were now relaxed so that the new local authorities might assume the right to classify the schools to be aided and specify, within certain limits, the subjects they should teach. And so wide were these limits that instruction under the regulations of the Science and Art Department became practically synonymous with secondary instruction. Having thus evolved a form of secondary education in the direction of advanced instruction in Science and Art, and having thus recognised a form of local authority for secondary education in the municipal

councils, the Science and Art Department was itself merged into the Education Department, the great central authority, organised under the Board of Education Bill of 1899.

Uniform examinations and inspection, conducted chiefly by the universities, have been another agency in the organisation of secondary education. The rapid increase in the number of secondary schools intensified their rivalries, and their irregularities, their excesses and their shams. Uniform examinations and regular inspection would tend to remove these and, in the unwillingness of the state to interfere, private organisations took up the task. Several headmasters combined in 1846 to form the College of Preceptors to test by examination the teachers of secondary schools. Later the College began to examine the students of secondary schools and its diplomas were accepted for admission to the study of law or medicine. About 4,000 schools now train students for the examinations of the College, and to that extent follow uniform courses of study. About 1850, societies were formed in various parts of England to conduct examinations for students in secondary schools. With a desire to direct the preparation of students for college, and more remotely, perhaps, to assist in organising the middle-class education of the country, the universities soon came to the assistance of these societies. In 1857 Oxford organised its local examinations for boys. Cambridge went further in creating its junior local examinations for boys of fifteen years and its senior examinations for boys of eighteen. Although the great Public Schools stood aloof, Oxford and Cambridge persisted, and the number of examination centres and subjects, and of candidates steadily increased. Urged to further action by the masters of the secondary schools these universities at last, in

1873, created a Joint Board to conduct leaving and matriculation examinations in the great majority of the secondary schools. These examinations are freely accepted for admission to the courses in arts, law, medicine, pharmacy, architecture, etc. The younger universities were not slow to follow the lead of the older in this matter of local examinations.

As a corollary of these examinations, the universities offered gratuitously the services of special officers for inspection, and many secondary schools accepted the offer. With this effort to guide the courses of study and the teaching of the secondary schools and with the less direct and more successful effort to mould those schools through its graduates who became teachers, the influence of the university on secondary instruction ended. The task of organising secondary education was beyond its powers. It must first put its own house in order.

The Charity Commission was a third agency to give direction to the organisation of secondary education. As might be expected from the temper of the English people, and from the complexities of existing conditions the state approached the problem of a permanent executive commission with excessive caution. For years it contented itself with Inquiries and Reports. Brougham's Commission of 1818 expired ultimately in 1837 with little to show for its many Reports other than a resolution on the part of the government to create the permanent Charity Commission. In 1853, subsequent to the inquiry of the Commission of 1849, a permanent Commission of four members was finally created. This permanent Commission was authorised to inquire into existing charities and foundations, and rectify wrongs by appeals to the Court of Chancery. It should receive and organise new charities, and it might reorganise such old

charities as were referred to it by their present managers. The expense of these appeals to Chancery was found to be very great, and in 1860 limited judicial powers were conferred upon the Commission.

But on the side of education this Commission had to do only with endowments in the form of charities. It could not interfere, where interference was most needed, in the administration of the great residence schools. In 1861 a special Commission was created to inquire into the nine Public Schools: Eton, Rugby, Winchester, Charterhouse, Westminster, Harrow, Shrewsbury, St. Paul's and Merchant-Taylors'. The headmasters, resenting the state's interference, declined to give the information desired by the Commission and the social prestige of the schools forbade all harsh measures to enforce the Commission's requests. The result was foregone. The Commission contented itself with a general reference to the abuses of the endowments of these schools and with a mild condemnation of courses of training which found no room for science, geography, English, drawing, and music. Non-committal as the report was, the government attempted to take action. A law of 1868 required the seven residential schools (St. Paul's and Merchant-Taylors' were day schools) to create new governing bodies and remove certain restrictions as to attendance, and at the same time appointed a special Commission to enforce these requirements. But this law was as ineffective as the report, and apart from some voluntary changes in the existing management of the Public Schools and from gradual changes in their courses of study, the lamentable tale must still be told of waste in revenues, of persistence in ancient methods, and of lifeless formality.

The report of the Commission on the great Public Schools directed public attention to the condition of

residential schools other than these Public Schools and the Taunton Commission was appointed in 1865 to inquire and report. The report—the ablest among such reports—referred to the unequal distribution of secondary schools. The rich were well-served; the poor neglected. One hundred towns with populations that averaged 5,000 were without endowed grammar schools. The report dwelt upon the waste in revenues, upon the exclusively classical character of the curricula, and upon the obsolete statutes, the absence of supervision, the sham instruction, and the evils born of secrecy in management. It regretted the weakness in numbers of the great proprietary schools and their isolation from both the elementary schools, and the universities. And it added an opinion that many Private-Venture schools were “swindling institutions as bad as they can be.”

The Commission recommended the creation of central and local authorities for secondary education. The central authority might be evolved from the Charity Commission by the addition of a few educational experts. Local authorities might be created by combining several local boards of managers of secondary schools into one board in charge of a group of schools. Local rates should be optional with the towns or parishes concerned, but inspection and examination, conducted to a large extent by the universities, should be universal. A few girls' schools should be endowed.

In response to these recommendations the Endowed Schools Acts of 1869 and 1873 created the Endowed Schools Commission, and authorised it to enforce a “conscience clause” in all endowed schools, to aid schools for girls, and particularly to initiate “schemes” for the administration of the older endowed grammar schools. The energetic action of

this new Commission—it evolved 235 approved “schemes” between 1869 and 1874—and the gradual extension of that action to charitable foundations, aroused the opposition of the Charity Commission. In the conflict that followed the older Commission won. In 1874 an obligation, not a permission, was laid upon a new Charity Commission to enforce new “schemes” upon all old endowments and between 1874 and 1895 these new “schemes” reorganised more than 1,400 residence schools.

But at best this method of reform was only a makeshift. It was cumbrous and absurdly slow. It could never hope to cover the whole system of endowed schools. Even where it reformed it could not reach the inner life of the schools and therein lay the gravest need of change.

Other agencies to direct the development of secondary education were the popular organisations for technical instruction. Almost from the beginning English educationists have urged that technical instruction be not separated from secondary instruction; the grant-schemes of the Science and Art Department could not or would not, as we have seen, distinguish technical and secondary courses of training; and to-day, apart from the ancient languages, the subjects of the secondary curricula of England are recognised by the state as essential parts of her technical curricula. To a large extent, then, the history of technical instruction in England is the history of secondary instruction.

The earliest movement towards special instruction for the industrial classes was philanthropic. Dr. Birkbeck, a Glasgow professor, organised science lectures for workmen early in the century. Before 1820 similar lecture series were organised in various cities in England, many of which developed into mechanics’

institutes and libraries. But the movement failed. In the absence of elementary instruction, the lectures were not intelligible to workmen, and gradually the mechanics' institutes disappeared, or were converted into clubrooms.

The Great Exhibition of 1851 taught England that her workmen lacked artistic taste and knowledge. She attempted to meet the lack by the grant-schemes of the Science and Art Department. The French Exposition of 1878 told with redoubled emphasis the tale of the Great Exhibition. The principles of science and art applied to manufactures were revolutionising the industrial life of the Continental nations. And these principles were taught in the technical schools of the Continent. England's population was urban; her interests were industrial; and yet her public education was exclusively elementary. Her danger at last aroused even her statesmen to action and a special Commission of Inquiry was appointed in 1881. In its Report (1884) this Commission defined technical instruction as elementary instruction supplemented by science, art, and modern languages. To organise and direct such instruction local committees should be created. Under these committees new secondary schools would be established, and technical and manual training and elementary science added to the curricula of existing secondary schools.

In its less direct results the Commission imparted a technical trend to the curricula of both primary and evening classes, and gave a decided impetus to the organization of technical classes in such great cities as Birmingham, Bradford, Manchester, Huddersfield, and in such special institutions as the Cowper Street School, the City and Guilds of London Institute, and the Polytechnics of London. But more directly the Commission led to the creation of Tech-

nical Committees. The Local Government Act of 1888 created county and borough councils. The Technical Instruction Act of 1889 found the basis of its local authorities for technical instruction in these municipal councils or the committees thereof. Subject to the conditions that they do not aid elementary instruction, and do not teach trades, these local authorities were empowered to supply or aid technical and manual instruction within their jurisdiction,—and for this purpose they might levy rates to the amount of one penny in the pound. But the councils were naturally cautious in exploiting their new-found rating powers and the Local Taxation Act of 1890 came to their relief by transferring to their account the surplus from the customs and excise duties to be appropriated to worthy objects, preferably to secondary and technical education.

Some features of these new local authorities were significant. The councils—and for that matter the state also—were as yet without definite principles or ideas as to the organisation of technical instruction. They distributed the grants carelessly and irregularly, and developed a disconnected series of technical institutions. For grant-purposes higher elementary, science, grammar, proprietary, and art schools, and in general all secondary schools sought the recognition of the new authorities. Moreover, the councils were required to regard technical instruction as advanced instruction in all secondary subjects except the classics. This led again to the inextricable intermingling of technical and secondary instruction and indirectly to the gradual acceptance of the councils as the local authorities in all secondary instruction.

Still another agency to give direction to the organisation of secondary education was the School

Board. The law of 1870 gave England her School Boards and her national elementary schools. Indirectly by competition these School Boards became an excellent stimulus to the existing secondary schools. Directly, by the evolution of higher elementary, organised science, and evening continuation schools, they overlapped or usurped the sphere of secondary instruction. The existence of these higher grade schools was not due to specific legislative enactments. And yet for some years the state in a negative way has favoured their growth. It has advanced the graduation limit in elementary schools and increased the number of the standards. It has encouraged with state loans buildings intended partly for higher elementary purposes. In organising technical education committees in 1889 it defined technical instruction in such a way as to include the higher elementary courses of study. It permitted the Science and Art Department to elaborate such a scheme of examinations and grants as would include the science, commercial subjects and manual training of the higher elementary schools. It even permitted that Department to recognise formally an advanced primary class in science, as an organised science school. And when the evening continuation classes, especially in London, quietly abandoned their elementary work after 1890, and broadened out into secondary schools with liberal courses in mathematics, science, art, commerce, gymnastics, etc., free to students of all ages, the state felt constrained to approve in the regulations of 1893.

The problems of technical and higher elementary education were thus inseparable from the vaster problem—the organisation of secondary instruction. This vaster problem now displaced primary education as the vital educational interest of the nation.

But the nation regarded the problem from diverse and disconnected standpoints. The universities, the Science and Art Department, the Charity Commissioners, the Committees on Technical Education, the School Boards all viewed it from different sides with a consequent dispersion of energy, overlapping, and waste of money. To bring order out of this chaos was the state's first duty. At last in 1894 the government appointed the great Commission on Secondary Education under Professor Bryce. In view of the complexities of the problem, of the rivalries between institutions, and of the universal desire for local independence, the Commission did not consider the internal organisation of the schools. And even in their external organisation there must be no sterilising uniformity. Co-ordination, economy, efficiency were the watchwords of the recommended reorganisation, but this reorganisation must not wrest from a municipality its right to work out in details its own scheme of secondary instruction.

The Commission recommended the amalgamation of the central agencies, Educational Department, Science and Art Department, and Charity Commissioners into one Department under a responsible head as Minister. The Minister should be assisted by a Consultative Council, representative of the universities, the teachers, and the crown. Apart from its advisory functions, this Council should institute a register of teachers. Local authorities should also be constituted to consist of representatives of the county and borough councils and of the central authority, and of co-optated members. Moreover, the university examinations should be continued, teachers should be trained, schools should be inspected and local rates should be more freely appealed to.

The great Bill of 1896 embodied many of these

recommendations, but great Bills in England—it has passed into a proverb—are baffled Bills. In the face of hostile interests and weak party ties, the Bill was withdrawn and the reforms were sought later by piecemeal legislation.

The diverse interests that have impeded the state's action in secondary education are in some sense peculiar to England. In France, or Germany, the state controls education; in England it may do little more than influence or stimulate it. In France or Germany, too, the central bureau is confident and effective from long familiarity with absolute authority. In England it is stiff from disuse, timid, and uncertain. "Collective energy works well in Europe; individual energy works well in England." And so the individualistic Englishman was slow to endorse the national movement in education and slower still to permit the state's interference with the vested rights of citizens. Moreover the Englishman was not sure that organisation was needed. Character, not scholarship, was the watchword of English education, and character was best served where each school worked out its own plans. And even if attempted, the organisation of education, particularly of secondary education, presented complications to daunt the ablest statesmen. But there was opposition to the attempt. The secondary schools themselves were hostile, the Church was hostile, and even by the masses the demand for reform was feebly supported. Finally there were grave practical difficulties. The Education Department, the Science and Art Department, and the Charity Commission, had each as a central authority shaped its own sphere of action and had each evolved its own honourable traditions. They would resent keenly the loss of their identity in a new Department of Education. On the side of the local

authority, suspicions and bitter jealousies separated the School Boards from the managers of Voluntary schools, and both from the Committees on Technical Instruction and from the various administrative bodies of the secondary schools. These suspicions and jealousies rendered it well-nigh impossible to follow the natural course and create a new local authority out of an existing authority.

The problem of a central authority was the first to be attacked. It was the simpler and more urgent problem—and its solution would assist in the solution of the more complex problem of a local authority. After several attempts and many compromises the Board of Education Bill passed in 1899. This Bill created in the Board of Education the first authoritative link between primary and secondary technical and artistic education in England, and the first effective instrument for the organisation of English education. The Board, consisting of certain members of the government, and presided over by a Minister of the crown shall direct the operations of the Education Department, the Science and Art Department, the Charity Commissioners (except with regard to endowments, and even here the Board's approval is essential), and the Board of Agriculture (in so far as it concerns education). It shall seek the expert advice of a crown-nominated Consultative Council, largely representative of the universities and other educational bodies. The Board must provide for the inspection of such secondary schools as shall request it, and, through the Consultative Council, for an official register of teachers.

The problem of the local authority awaits solution. As early as 1896 the government intimated that this local authority should not be the existing School Boards. "They were overworked, narrow, plebeian

bodies representative of but a part of the community and out of sympathy with the larger interests of education. To make it more impracticable politically, they were at enmity with the Church and existing secondary schools." Thereafter it steadily repressed the School Boards. It withdrew its grants from the higher elementary schools and refused to sanction the creation of new science schools. In the directory of the Science and Art Department of 1897-8 it seemed to prejudge the whole question by providing that "where satisfactory county organisations exist, these may be regarded as the local authority responsible to the Department." At the close of the century the balance seems to have swung so far as the state is concerned in favour of these municipal councils "as large, representative, generous, and cultured local authorities."

Significant movements accompany this evolution of central and local authorities. The teachers in secondary schools have organised themselves into associations and have begun to direct educational thought and legislation. With the failure of the private efforts of the College of Preceptors they have induced the government to provide through the Consultative Council for the official registration of teachers. They have insisted so earnestly upon the need of professional training of secondary teachers that the Girls' Public Day School Company, the Teachers' Training and Registration Society, and a Training College at Cambridge have organised classes-in-training for female teachers, while Oxford, Cambridge, Durham, and London provide, in a more or less satisfactory way, for the professional training of male teachers. Keen competition among secondary schools has improved buildings, equipment and instruction. Art, in the form of drawing, French and German, science,

and in many cases commercial subjects have taken their places upon the secondary curricula side by side with the older mathematics and classics, and the demand for technical instruction promises still further to enlarge the curricula. Discipline grows less harsh and for the moment there appear signs of a reaction against the "tyranny of athletics." But with these tendencies go what might seem to be reactionary movements. The new authorities may eliminate what is feudal and ecclesiastical in the secondary institutions but they must not destroy what is special or individual. Local independence and initiative are as sturdily maintained now as one hundred years ago. Modern industry may give new subjects and interests to secondary education, but it cannot alter its chief purpose. "The schools shall always afford a discipline of character; they shall always train the youths of England for the searching examination of real life in politics, war, the church, or affairs."

The story of secondary education in Wales is in the main happier than this story of England. England began with the advantage over her remote and poorer neighbour. Wales had a few private schools in 1800, but scarcely any proprietary or endowed schools. Had it not been, indeed, for an effective system of Sunday Schools and Circulating Schools, the great mass of Welshmen would have been without formal education, elementary or secondary. England kept her advantage during the first half of the century while both parts of the island passed through a period of Inquiries and Reports and of little progress. The change began in 1847 with a special Inquiry into the state of education in Wales. The Report of this Inquiry, though fruitless so far as legislative action is concerned, revealed so clearly the worthless-

ness of Welsh education as to cause a remarkable outburst of national pride and resentment. And this pride, combined with the enthusiasm, the self-denial, and the practicality of the Welsh character, made the evolution of a formal system of secondary instruction possible, and, in the end, inevitable.

It began by creating new schools. Between 1847 and 1870 seven grammar schools were revived in Wales, schools for girls were established at Llandaff and Denbigh, and a Collegiate school was founded at Llandovery. The Taunton Commission of 1865-6 found that the number of secondary institutions had increased to thirty-six endowed grammar schools with classical courses for boys, two endowed schools for girls, and 120 unclassified schools of an elementary commercial type. It gave an impetus to the movement under Sir Hugh Owen for the creation of a Welsh university and thus indirectly to the subsidiary movement for the creation of secondary schools in which to prepare candidates for that university. It endorsed, with greater cordiality than obtained in England, the "schemes" of the Charity Commission (the Endowed Schools Acts were applicable to Wales as well as England) for the reorganisation of endowments. And it found its best expression in the aims and actions of the new electorate created by the Reform Bill of 1867.

This new electorate was hostile to English conservatism. It had no sympathy with the Established Church, which directed secondary education in England and claimed the right to direct it in Wales. It resented, therefore, the conditions which made Wales a yokefellow of England in all educational reforms. Out of its persistent demands for separate treatment came at last, in 1880, the appointment of a Special

Committee to inquire into the state of intermediate and higher education in Wales.

The Report of this Committee, in so far as it referred to secondary instruction, pointed out very carefully the defects in the existing schools and the difficulties which attended upon a removal of these defects. English was the language of the schools and yet a majority of the youth of the principality spoke only Welsh. The Welsh were poor and only a very small number could bear the burden of an education in expensive residence schools. All the endowed schools (twenty-seven for boys and three for girls) were English in purpose, and classical, and the Welsh disliked the English ideal, and preferred the modern training of their private schools, even though elementary, to the classical training of the best endowed schools. Finally the administration of the secondary schools was largely ecclesiastical, and the Welsh were bitterly hostile to ecclesiasticism.

In view of these difficulties the recommendations of the Report were drastic. Both the Welsh and English languages should be recognised. All endowed and grammar schools should be reconstituted. They should be enlarged, their fees should be reduced, science and modern languages should be added to their curricula. New secondary schools should be created with a commercial and technical purpose, and the elementary schools should be expanded into higher-grade schools of a secondary type. In these schools, the fees should be low. Students might find help in scholarships, and the school managers should supplement their revenues by local rates. Ecclesiastical control must give way before popular control; a "conscience clause" should protect every creed.

Delayed for a few years pending the creation of municipal councils under the Local Taxation Act, the

Intermediate Education Act of Wales was passed in 1889. The Act created, in each county and in each borough, a Joint Education Committee consisting of three representatives of the county council or borough council, as the case might be, of two representatives of the President of the Committee of the Privy Council on Education, and of the assistant Charity Commissioner (who might sit with the Committee, but could not vote). Subject to the approval of the Charity Commissioners, in so far at least as pertained to endowments, these Joint Committees prepared "schemes" for the administration of secondary and technical education within their respective jurisdictions. County and borough councils were empowered to appropriate local rates to the maximum of one-half penny in the pound to the maintenance of these "schemes" and the state promised an equivalent grant, subject to the results of inspection. The Act provided further that every scheme, unless it be for the Cathedral Schools, should be non-denominational. The Committees were authorised to act for three years, but their lease of authority has been extended continuously.

Each Joint Education Committee has evolved a distinct scheme for each county or borough. In the main the county "schemes" include a general or county-governing body representative of the county councils, and of the local governing bodies with co-opted representatives of the university colleges and other institutions, in all from twenty to thirty members, and local governing bodies of eleven to sixteen members, representative largely of the county council, the county governing body, the local government authority, and the schools. The county governing bodies have general control in the matter of pensions for teachers, scholarships, inspection, county exam-

inations, travelling instructors, and the distribution of the county funds for secondary and technical education. These funds are made up from the county rates, the surplus from the customs and excise duties, the state grants, and endowments. The local governing bodies generally appoint the teachers (although in this and other particulars there is little uniformity about the respective jurisdictions of the two governing bodies), prescribe the courses of study, specify the fees, and, in the main, supervise the conduct of the schools. Low fees and very numerous scholarships make possible the attendance of the poorest. There is great diversity in the courses of study. Generally science and technical subjects are optional but even the most classical of curricula are less classical than those of the English schools. Religion is taught, but it must be, and, unless it be in the residence schools, is non-sectarian.

The borough "schemes" include local governing bodies whose jurisdiction and function combine those of the two governing bodies for the county schemes.

Efforts to harmonise the county "schemes," in so far as examinations and inspection are concerned, led to many conferences among the Joint Education Committees and these conferences soon made evident the need of a central education authority for Wales. In 1896 the Central Welsh Board for the Inspection and Examination of County Schools was created. With this definite organisation of her secondary schools, Wales has freed herself from many of the problems that press for solution in England. She has outstripped England, but she still has problems to solve. Her secondary teachers are without professional training; the Established Church still dominates her residence schools; her school endowments are not yet effectively administered; she is burdened

by an elaborate and extravagant examination and scholarship system; and she is not only without preparatory schools, but she has failed to discover a very efficient way of passing pupils at an early age from the elementary to the secondary schools.

✓*Higher Education.*—Higher education in England in 1800 was limited to the universities of Oxford and Cambridge. Three of Oxford's nineteen colleges were founded in the thirteenth century, seven more before 1500, six during the great century of the Reformation, two in the reign of James I. and only one between 1624 and 1800. The history of Cambridge's sixteen colleges begins with the foundation of Peter House in 1257. Nine colleges were added before 1500, and six during the sixteenth century; but between 1600 and 1800 there was a blank in college expansion.

Between 1625 and 1800, then, the foundations, and accommodations as well, for higher education in England remained practically stationary. In view of the rapid growth in population and the vast material and spiritual progress of the last half of the eighteenth century, this stagnation was significant. With a conservatism on the one hand that exceeded the conservatism of all English institutions, the universities seemed to draw away from the great movements of the England about them and to wrap themselves up in the traditions of the past. College endowments were centuries old, but the colleges still administered them in the spirit of their founders. University organisation was antiquated and cumbrous, but so violent was the academic opposition to change that even the parliament feared to suggest reforms. The curricula themselves did not vary a hair's-breadth from the curricula of the Renaissance. With an exclusiveness, on the other

hand, that was even more marked than their conservatism, the universities seemed to hold themselves more and more aloof from the masses of the people, and to contract themselves more and more into special schools of the Church and aristocracy. And their exclusiveness in origin, history, and traditions, their fewness in numbers, their remoteness in situation from the great centres of national life, their cloister-like organisation, their mediæval studies, were all evidences, if not effects, of this aloofness.

In 1800 Oxford University was still governed under the Laudian Statutes of 1636. The chief official body was the Hebdomadal Council, consisting of the heads of the various colleges; the chief executive officers were the vice-chancellor and the proctors, all of whom were chosen by a very restricted academic electorate. Cambridge was administered under a Code of 1570. Legislative initiative here rested in the arbitrary *caput senatus* (the vice-chancellor and five members), and one vote was sufficient to veto a measure. Colleges, whether at Oxford or Cambridge, were distinct from the universities in organisation and endowment, and preserved even more faithfully than the universities the spirit of their founders. They were ruled by the fellows through the despotic heads or "masters." Registration and residence at one of these colleges under conditions almost monastic in character, were compulsory upon all university students. The universities were poor; the professors were not numerous, and these few did not teach. On the other hand, the colleges were wealthy; the fellows were required to teach, but in truth the real teachers were the private "coaches."

Certain features of college life and administration tended to limit the college to the sons of the wealthy and aristocratic. The cost of residence-life was great.

College exhibitions and scholarships intended at first for poor and promising youths were now restricted practically to certain preparatory schools, and even to certain families. Family influence controlled the elections to college fellowships. Even admission to a college was often denied to all but the graduates of specified secondary schools. More than all this, the purpose of college education to train gentlemen and scholars favoured those to whom time and money were of little moment, at the expense of those to whom education must always mean "a way of getting on in the world." The influence of the Church prescribed even narrower limits to the college attendance. Preparatory schools for Roman Catholics or for Nonconformists were neglected or illegal. Only members of the state Church could be prepared for a university. Moreover, Oxford would not accept a dissenter as an undergraduate, and Cambridge denied him a degree or office of emolument. The most of the professors were clergymen of the state Church, and practically all fellows must take orders.

The same exclusive temper is evident in the college curricula. The education of the past had been altogether classical. In classics, and in classics only, the pedagogic world had developed considerable skill. Classics, it had been proved, moreover, would train both gentlemen and scholars. Little wonder, then, that the spirit of utility, the scientific spirit of modern industrialism, as represented in the middle and lower classes should receive neither welcome nor recognition at Oxford or Cambridge. And the courses in classics were so ordered as to suit those upon whom the stern problems of life did not press. The courses were not extensive and not complete. They were filled out, even in 1800, by a generous amount of

athletics. Attendance for three and four years—not progress—was the only qualification for a degree. Honours were carelessly bestowed, class-grading even more carelessly. Examiners were often unfitted for their duties; Oxford's examiners were without any prescribed fitness; examinations were perfunctory ceremonies.

Drastic reform, in view of the conservative and exclusive temper of the universities, was impossible. For the first half of the century the country was obliged to content itself with slight, though significant, changes. Oxford organised definite examinations for graduation in 1802, and in 1807 she separated *literæ humaniores* and mathematics into two honour departments. In 1824 Cambridge added classical tripos to the mathematical tripos already in existence, but for twenty-six years she restricted the classical tripos to holders of honours in mathematics. In 1849—her Whig sympathies made her less conservative than Oxford—she recommended the creation of tripos in moral and natural science. Meanwhile, in both universities examinations assumed a more reliable form; examiners were more carefully chosen; and fellowships and prizes became the rewards of successful tests.

But the demand for radical reform grew yearly more insistent. Conscious of a growing importance in English politics, the masses resented the exclusiveness and the creed-distinctions of the universities. Utility, they claimed, should rank with culture as the purpose of new university courses. These new courses should include the natural sciences, mathematics, and modern languages. Following the line of least resistance, the first response to these demands was the creation of new colleges rather than the reform of the old.

A non-denominational teaching college, designed to be the nucleus of a great university, was organised in London in 1826. Out of the Church's hostility to such an institution came its rival, King's College, in 1831. In 1836 the non-denominational college was recognised by royal charter, and, as University College, was affiliated with King's College to form the new University of London. For fourteen years the University examined, and the two colleges taught, all students registered in the University of London. In 1850 the University's examinations were opened to students from affiliated but uncontrolled colleges, and in 1858 all restrictions as to the source of the preparatory education of the candidates were removed. From the first, London was more modern than Oxford or Cambridge in courses of studies. She always recognized mathematics and science, and in 1860, earliest among English universities, she instituted the degrees of B.Sc. and D.Sc. And from the first London was less exclusive than the old universities. She made no distinctions as to creed, sex, or race.

Contemporaneously with the foundation of London's first colleges, the bishopric of Durham took steps to supply the needs of the North. In 1831 the dean and chapter organised the University of Durham. Handicapped by poverty and local indifference the progress of Durham University has not been noteworthy. In 1852, it affiliated with the College of Medicine at Newcastle; in 1856 it organised the School of Physical Science at Durham; and in 1871 it affiliated with the College of Physical Science, recently established by the city of Newcastle. Apart from its generous recognition of the natural sciences, the spirit of Durham reflected to some extent the spirit of Oxford or Cambridge. It enforced attend-

ance and residence; it was dominated by the Church; its standard of admission was low. Its poverty and its intimate relation to the Church accounted on the one hand for the low standard of its arts and medical studies, and on the other hand for the unusual excellence of its theological faculty.

But the demand for the reform of the old universities could not be forever turned aside. In 1850 the Queen appointed a Commission to enquire into the state, discipline, studies, and revenues of Oxford and Cambridge. At once the universities were up in arms at this attack on private and long-vested rights. They would not answer questions or produce documents. Oxford went so far as to question the legality of the Commission. With the publication of the Commission's Report in 1852, however, university reform was inevitable. Oxford's reforming Act was passed in 1854. This Act gave the university a new constitution. Henceforth the Hebdomadal Council was to consist of official and elected members. The official members were the chancellor, who was chosen, generally for life, by Convocation, and whose duties were largely honorary; the vice-chancellor, who was nominated by the chancellor for one year, and whose duties were arduous; the ex-vice-chancellor, and the two proctors. The elected members were six heads of colleges, six university professors, and six members of convocation, chosen every six years by the bodies whom they respectively represented. The Hebdomadal Council initiated all university laws and submitted all laws, petitions, etc., to the Congregation and Convocation for approval. The Congregation, whose functions, apart from granting degrees and appointing examiners, were largely ceremonial, consisted of resident masters and doctors of arts. The Convocation, with its wider electorate,

was even more circumscribed in authority than the Congregation. The Act also abolished the tests for matriculation and for the bachelor's degree. In the previous year Oxford made her first feeble response to the modern spirit of utility in the institution of an honour degree in natural science.

The Cambridge Act of 1856 reformed the Senate in the same spirit as the Oxford Act had reformed the Hebdomadal Council. The Senate, which consisted of all registered masters and doctors, was to be the great legislative body of the university. Its chief executive officers were the chancellor, vice-chancellor, steward, and the two proctors. Going further, it abolished all restrictions as to creeds. No oaths or declarations were henceforth to be required for any degree except that in divinity.

To carry out in detail the reforms outlined in the Acts, a Universities Commission was appointed. This Commission was empowered to exact documents and information from the universities and to ratify the new statutes submitted to it by the universities and colleges. If the latter neglected to amend its statutes, the Commission might intervene and issue ordinances subject to the approval of Parliament or the Queen-in-council. At the same time a special Committee of the Privy Council on Universities was created to consider petitions, or references, connected with university matters. The earlier reforms under these conditions were permissive and suggestive rather than obligatory. But the college doors were opened wider, long-standing class prejudices were removed, many antique and cumbrous forms vanished, new professorships were created, and all restrictions were withdrawn from the elections to fellowships.

After 1868, in recognition of the limited accommo-

dations of the colleges, and of the rapid growth in college registration, students were permitted to live in licensed lodgings outside the colleges.

In 1871 the Universities Test Act was abolished and with it went all oaths and declarations as to creed at Oxford, Cambridge, and Durham, except in the faculty of divinity.

University revenues had always been inadequate as compared with college revenues. With the growth in curricula, examinations, and professorships, this inadequacy was fast becoming unbearable. In 1872 a Commission was appointed to enquire into university and college revenues, and, in accordance with the report of this Commission, the Act of 1877 created an executive Commission for each university to make provision for university expenses out of college revenues. This Commission, sitting with three representatives from each college, was empowered to suggest schemes for the adjustment of university and college revenues, and these schemes became statutory when ratified by the academic bodies concerned.

Some details in the more recent history of the two great universities should be noted here. The revenues of colleges and universities have been strained to the utmost. In the annual publication of their balance-sheets, the universities tacitly assume the state's interest and ultimately the certainty of the state's assistance. University examinations have been fully organised; the appointments of examiners are better regulated; and yet all schemes for admission-examinations have been either rejected or left to the discretion of the colleges concerned. The curricula have expanded steadily, and with them have increased the number of honour departments and of professorships. Oxford alone has added, since 1850, professorships in Latin literature, history, metaphysics, physiology,

zoology, philology, jurisprudence, fine arts, ancient history, Chinese, Celtic, Roman law, modern languages, etc. Special classes have been organised for secondary teachers. Athletics still play a large part—if not too large a part—in college life. The less exclusive spirit of co-operation and federation has been abroad in the university world. The universities accept all classes and conditions of men—and even women—as students. Each college opens its lecture-halls to the members of other colleges. In its anxiety to help all men, the universities in their extension lectures send their teachers out to those who cannot come within their walls. Going farther, Oxford in 1880 and Cambridge in 1886 stretched out to affiliate with other colleges in the kingdom, and even with colleges in the colonies. Finally there is growing in Oxford and Cambridge a conviction that the true and really great university must provide specific opportunities and means for research and post-graduate study.

During the last half of the century, public pressure, as we have seen, slowly—and not completely—wore down the exclusive and conservative temper of the old universities. As a natural corollary, the demand for higher education of a modern type increased enormously. In response to this demand Keble College was founded at Oxford in 1870, and Hertford College in 1874; Cavendish College was founded at Cambridge in 1873, Selwyn College in 1882, and Ayerst Hall in 1884.

But the most generous responses—most generous not only in the extent of the foundations, but in the modern spirit of those foundations, came from the new university colleges. These colleges have varied organisations. They were private in origin, or municipal. Their endowments are small, but the state

and the municipalities have been generous friends. They are open to both sexes and all creeds; they are day colleges and residence colleges; they have day classes and evening classes; they conduct regular examinations for admission, promotion, and for degrees. Their courses emphasise, perhaps at the expense of culture, mathematics, science, modern languages and the commercial branches, and, as a link between the great universities and the industrial centres, they attract in a special way the sons of industry and commerce. Owen's College, Manchester, was founded in 1851 by private bequest; Leeds' College followed in 1874; Bristol's in 1876; Sheffield's in 1880; Birmingham's in 1880; Nottingham's in 1881; Liverpool's in 1882. About Owen's College as the nucleus, Victoria University was organised in 1880, with faculties in arts, science, law, and, later, medicine. Liverpool joined the new university in 1884, and Leeds' College in 1888. In 1889 the crown made its first annual grant of £15,000 for distribution among the university colleges, and in 1897 this amount was increased to £25,000.

In sympathy with this expansion movement in higher education, a University Commission Act of 1898 at last created an Executive Commission to reorganise London University. Under the statutes of this commission, such closely affiliated university schools as King's, University, and Bedford Colleges, and the City and Guilds of London Institute should form the teaching side of the university; but the university should continue its own examinations. Residence was not to be required and attendance was to be exacted only of those registered in the university's schools. With Victoria established and London securely reorganised, the expansion movement turned towards Birmingham, where, at the close of the cen-

tury, the enthusiasm of Mr. Chamberlain and the generosity of Mr. Carnegie were laying the foundation of the Empire's greatest commercial university.

Wales attacked the problem of university expansion with as much enthusiasm as she had shown in attacking the problem of secondary education. She planned a university college as early as 1854. She opened the college of Aberystwyth in 1872. The Committee on Intermediate Education in Wales felt the great need of teachers for their new secondary schools, and urged the government to aid university colleges in North and South Wales. As a result, Cardiff College was opened in 1883, and Bangor College in 1884. In 1893 the three Welsh colleges were incorporated as the University of Wales, with a constitution similar to that of the Scottish universities. The endowments of the new university are unimportant, its fees are small, its mainstay is the state grants. Since 1895 the three colleges conduct joint matriculation examinations, and grant degrees after a three-years' course.

University Extension and the Higher Education of Women.—Despite the conservative temper of the English universities they have responded well to the demands for an extension of university influence and teaching among the masses, and for the higher education of women. As early as 1858 the universities began to conduct local examinations as a way of inspecting and improving the secondary schools. The North of England Society for Promoting the Higher Education of Women organised successful courses of lectures in 1867. A Cambridge syndicate took over these courses in 1873 and in 1878 this syndicate on local lectures was amalgamated with the syndicate on local examinations. The London Society for the Extension of University Teaching

was organised in 1876, but Oxford, always cautious where popular movements are in question, did not create its first delegacy on local lectures until 1892. Judged by the number of class-centres and students, these University Extension lectures have been popular and effective in England, but at best the work scarcely rises above the sphere of secondary education.

In 1872 Girton College for women was incorporated at Cambridge. Many educationists thought that in time Girton should bear the same relation to the higher education of women as Cambridge University bore to that of men. The same college standards should be exacted from both sexes. Others thought that special courses with special examinations should be instituted for women, and in 1869 the Cambridge syndicate on local examinations organised a special examination for women over eighteen years of age. Out of the classes formed at Cambridge to prepare for these examinations grew Newnham College in 1880. Until 1881 university examiners continued to examine the students of these two colleges unofficially. Thereafter the students were admitted to the regular examinations of the university, but the results of the examinations were issued in separate lists for men and women, and no woman could be admitted to the formal degrees. Oxford instituted local examinations for women in 1877. The influence of the Oxford Association for the Higher Education of Women led to the creation of Lady Margaret and Somerville Halls at Oxford in 1878. St. Hugh's Hall was added in 1886, and St. Hilda's in 1893. All examinations for the bachelor's degree at Oxford were opened to women in 1894, but the university has steadily refused to confer the formal degree upon women. London and Victoria Universi-

ties and the various university colleges have long made little or no distinction between men and women in the matter of examinations or degrees.

Higher Technical Education.—The Science and Art Department maintains two special colleges at South Kensington. The Royal College of Science, a direct descendant of the State School of Mines and Science, and of the Royal College of Chemistry of the early '50's, and still in affiliation with the Royal School of Mines, has provided advanced instruction for the teachers of physical science since 1880. The Royal College of Art, a direct descendant of the School of Design, founded in 1837, has been since 1852 a national training school in art, and, more particularly since 1896, a training school for the teachers of advanced art.

A part of the work of the City and Guilds of London Institute also probably belongs to the sphere of higher education. A committee of the Livery Companies of London was formed in 1877 in behalf of technical instruction. Out of this came the incorporation of the City and Guilds of London Institute in 1880, and the organisation of the Central Technical College at South Kensington in 1884. From its headquarters in Gresham College, the Institute conducts examinations throughout the country, and even in the colonies.

CHAPTER III.

IRELAND.

Primary Education.—The last half of the eighteenth century in Ireland gave little promise of the progress of the nineteenth. The population of the island had grown rapidly, while unjust fiscal laws had reduced that population to hopeless poverty. Social and religious feuds left the country a prey to secret societies in whose atrocities she reaped “the terrible fruits of a century of oppression and wrong.” A miserable system of landlordism stirred the poverty-stricken peasants to revolt after revolt, and each revolt suppressed left a legacy of cruelty and hatred which centuries will not remove. “If there ever was a country unfit to govern itself,” said a contemporary, “it is Ireland. A corrupt aristocracy, a ferocious commonalty, a distracted government, a divided people.”

In this chaos of misery and tyranny the record of educational progress could not but be a sorry one. Education of a kind had not been neglected in the years that preceded the accession of George III. In 1537 Henry VIII. established, for the poorer classes of the Catholic faith in Ireland, parochial schools, wherein should be used the “English tongue, habits and order.” Elizabeth followed in 1570 with the diocesan schools for the wealthier classes of the Protestant faith. The six Royal Free schools endowed

by James I. in 1608, and existing in the nineteenth century as secondary schools, were so organised as to admit to residence only the Protestant youth. Even Erasmus Smith's noble bequest of 1657 to endow schools for poorer Irish boys exacted scripture study and the catechetical training of the Established Church. The year 1672 saw the creation of a few Blue Coat Hospital Schools for the Protestant poor of the large centres, and 1733, that of the more famous—and more notorious—Charter Schools. Controlled by a duly incorporated society and generously assisted by the state, these Charter Schools were at first open only to Catholic children to whom should be taught "the English tongue, the Protestant faith, and loyalty to the new Kings." But between 1750 and 1790 history reveals few traces of real educational progress. In matters of education Ireland slept or was exhausted.

All Irish education, then, prior to 1800, told the same unhappy tale. England forced upon Ireland educational agencies which would best serve England's purpose. Not what Ireland needed, but what England thought she ought to need was the educational criterion. Irish schools revealed in aggravated form the English purpose to give the Irish people English speech and English habits, and to develop in Irish breasts a loyalty to English kings, institutions and faith. And the very intensity of this purpose resulted in gross injustice. Catholics could not endow Catholic schools, Catholic youths could not go abroad for the Catholic education that was denied them at home, Catholics could not become instructors in public or private. Even the native "hedge-schools, where under ruined walls or in the dry ditches by the roadside ragged urchins in the midst of their poverty learnt English and the elements of arithmetic and

even to read and construe Ovid and Virgil," were illegal and the masters in danger of penal servitude.

The later history of these English schools in Ireland reflects the exclusive and unhappy character of their organisation. The parochial schools drifted into private or exclusively church schools or faded away before the National schools of the nineteenth century. Diocesan schools, with the disestablishment of the Irish Church in 1868, became, like the Royal Free schools, the Erasmus Smith schools, and the Blue Coat Hospital schools, the inadequately-equipped intermediate schools of the middle classes of the Protestant faith. The growth of Catholic influence and the evolution of a new Protestant conscience forced, about 1830, the withdrawal of state aid from the Charter schools, and wrought their undoing. Crown grants in these latter schools had been distributed over great areas and wasted in elaborate forms of education. Catholic children would not attend them, and at last even the better-class Protestant youths frowned upon them. "The children were sickly," said the philanthropist, Howard, after careful inspection of these schools, "pale, and such miserable objects that they were a disgrace to society."

The last decade of the century revealed the beginnings of a new interest in education. A parliamentary Commission on Endowed Schools (1788-1791) reported that, "Charter, Parochial, Diocesan, and Royal schools alike have failed to realise the intentions of their founders," and found that a large proportion of their revenues of £45,000 per annum "has been grossly misapplied" and that "great frauds and abuses have been committed." Special legislation removed, in 1792, the restrictions upon the endowment of Catholic schools and upon the instruction of Catholic children by Catholic teachers.

At once the various orders of nuns took up zealously the work of educating the girls, and in 1802 Rice began among the street-boys of Waterford the work which to-day, as the work of the Christian Brothers, is the paramount educational force in the urban centres of Ireland. The unrest that sprang from the spread of revolutionary ideas prevented the creation of a Special Board of Control for Endowed Schools, as recommended by the Commission of 1788-1791, but the new temper of the nation forced Trinity College, in 1793, to admit Catholics to the college courses, and in its fear of a foreign-trained priesthood, endowed, in 1795, with £8,000 per annum, the Catholic divinity college of Maynooth.

This interest in education did not fade with the new government under the Union. A Royal Commission of Enquiry into Endowed Schools (1806-1812) declared that Irish education should be organised into an undivided body under one system, and that, while no system was possible without "an explicit avowal and understanding that no attempt shall be made to influence or disturb the peculiar religious tenets of any sect or denomination of Christians," there might still be a common literary, moral, and to some extent religious instruction, and there certainly should be a unity of interest and effort. In these three points the report of this Commission struck the keynotes of Irish educational legislation throughout the century,—an organised system under one head, a common curriculum so far as this is possible without proselytism, unity of interest and effort among all Irish children.

The Kildare Place Society (1811) of Dublin, with its schools for the poor, was the outgrowth of this report. It was an "undivided body under one head;" it claimed to be non-sectarian; and it strove

to unite Irish youths in a singleness of interest and effort. Its school-books were modern, its schools were inspected, and its masters were trained, and the state aided it, at first, enthusiastically. To this extent the Society succeeded. But in the end its own organisation destroyed it. The "undivided body" was a private, and therefore irresponsible, body. Two-thirds of its schools were in Protestant Ulster. The course of study, which included the study of the scriptures without comment, together with the predominance of the Protestant clergy in the controlling body, was too suggestive of proselytism. Suspicion to which long experience had made them susceptible drove the Catholic children out of the schools, and with them went all hopes of "unity of interest and effort." The Society steadily retrograded after 1825, and the state grant was withdrawn in 1833.

The Second Royal Commission of Enquiry into Irish education (1824-1827) endorsed the recommendations of the Commission of 1806-12. It defined that "combined literary and moral and separate religious instruction," which was to be the basis of the National system, and indirectly it dealt a death-blow to state recognition of such intolerant organisations as the Charter Schools, and the schools of the Kildare Place Society.

Stirred to action by the growth of the O'Connell movement in Ireland, the House of Commons appointed in 1828 a select committee of its members to consider the Reports of 1806-12 and 1824-7. The Report of this Committee outlined the proposed National system. A central authority to distribute crown grants, to formulate regulations, to train, register, and pay teachers; local authorities to supervise schools and engage teachers; model schools; effi-

cial inspection; graded text-books; these are the main features of the system. More important in its ultimate effects was the Committee's insistence upon "combined literary, and moral, and separate religious instruction." "Elementary education should rest upon religion, but should be free from the taint of proselytism."

With the third decade of the century we come to the great era of educational reform. A second Select Committee of the Commons (1830) insisted upon the immediate organisation of a national system, and, September 9, 1831, brought the official announcement of that system. The masterly letter (1831) of the Irish Secretary, Stanley, in explanation of the system, was prefaced with a declaration of what the system should not be. It should not be subject to the control of a private and irresponsible body, such as the Kildare Place Society. It should not permit interference with the religious tenets of the children. It should not destroy the unity of feeling and purpose that comes from a common education in a common building. The central authority should be a crown-nominated Board of Commissioners who should hold office during pleasure without remuneration. This Board should establish Model and Training Schools, maintain a register of qualified teachers, and provide for the regular inspection of the schools under its control. But chiefly it should distribute among its schools, in accordance with well-defined conditions, the annual parliamentary grant. Each school's share of this grant should include two-thirds of the original cost of the school building (if not already erected), a portion (the larger portion as the sequel showed) of the teacher's salary, about one-half the cost of the secular text-books, and some small fraction of the cost of the school apparatus and of the

books for religious instruction. The local managers of the school should, on the financial side, provide for the site, at least one-third of the cost of the building (if not already erected), a fixed portion of the teacher's salary, the current repairs, and the school apparatus. To meet these charges the managers might avail themselves of endowments, subscriptions, and the school-pence of the children. On the side of internal government they should provide for compliance, under official inspection, with a specified course of study, and particularly compliance with the regulation which "opened all schools to all creeds for combined literary and moral instruction by the master during certain hours of five days per week, and for separate religious instruction by the respective pastors or other approved persons during the other days of the week, or during such hours of the ordinary school days as were not set apart for literary and moral instruction."

These local managers, themselves self-appointed or nominated by the patrons of the schools, were to be in no sense civil authorities. Four-fifths of them were local clergymen. They supervised the local interests of the schools, appointed and dismissed teachers, collected the school fees, and arranged timetables.

Of necessity Stanley's Letter left the system merely in outline. The Explanatory Document of 1832 did much to fill in this outline, and, for the rest, the government trusted to the wisdom of the Board of Commissioners in expanding and interpreting the Letter. The Explanatory Document classified schools as *vested* where by virtue of the aid given in the erection of buildings the Commissioners assumed full proprietary rights, and as *non-vested* where the title-deeds and the authority to control remained with the

local managers. It conditioned the Board's control of the schoolmaster and the text-books, and defined very cautiously the time, place and condition of separate religious instruction.

In expanding and interpreting the Letter, the Board of Commissioners was beset with numberless difficulties. To the British people of 1830, unaccustomed to state interference in education, the creation of a central authority threw into the educational problem a new and anomalous factor. This central Board assumed control of education when the resentment born of the bitter feuds between Protestant and Catholic during the eighteenth century, had scarcely begun to subside. It assumed control, too, when text-books were few or worthless, the school-rooms wretched hovels, and the teachers ignorant and untrained. To add to its difficulties the Board was sadly hampered in its jurisdiction and internal organisation. It might expand and interpret, but it must not alter a fundamental principle of the great Letter. Its administrative duties were extensive, and it must perform those duties with unanimity despite acute religious differences. With patience and wise compromise, it has, however, overcome these difficulties, and has done not a little to solve the great educational problems that confront all modern democracies.

The religious problem presented the greatest difficulty to the Board of Commissioners. Stanley's Letter recognised the British faith in an education whose basis is religion by providing for "separate religious instruction" as well as "combined literary and moral instruction." The Board's recognition went farther by interpreting "moral instruction" as such general religious instruction as might be imparted without offence to all creeds during

ordinary school hours and through the ordinary Readers. But even with this recognition the churches were not content. The Ulster Presbyterians would have the Bible in all instruction. The Irish Church would have both Bible and Catechism.

In the spirit of compromise the Board prepared Selections from the Scriptures and a Book of Sacred Poetry, to be used in the National Schools during ordinary school hours; but opposition was not thus disarmed. The Presbyterian Synod would have no "abridged Bibles." It protested against the centralisation of authority at Dublin and it resented the subjection of a peculiarly ecclesiastical service, such as education, to a secular body. Tedious negotiations followed between Synod and Board. Compromises were made and broken; an independent system was projected and failed; at times even mob law interfered. But in the end, poverty, the patience of the Board, and the new Protestant conscience won, and the year 1840 brought an agreement between Board and Synod which has been faithfully observed ever since. The opposition of the Irish Church was even more pronounced and more prolonged, and its efforts to create an independent system were scarcely less futile. After 1850 it, too, accepted the National Board.

The acceptance of the National system by these Protestant churches was not the result of changes in the fundamental principles of Stanley's Letter. Time and experience familiarised them with the idea of a central and secular authority. Liberal interpretation of the Letter did the rest. In schools whose pupils were almost exclusively of one creed "separate religious instruction" might be given (1837) during the ordinary school hours, provided that the literary instruction of any child exempted

from such instruction was not interfered with. In non-vested schools wider jurisdiction was allowed the managers in prescribing the time and place of the separate religious instruction. In practical results these compromises have made denominational schools of the English type out of such schools as belonged exclusively to one creed.

Whilst the Protestant churches were at last accepting the National Schools, the slumbering opposition of the Catholic church was breaking into open hostility. In the presence of the national enthusiasm and under the guidance of its saintly Archbishop Murray, the Catholic church had accepted the National system. But it was never content with that system. The Archbishop's influence and the Board's lukewarmness in enforcing their use barely prevented an open rupture when the Selections from the Scriptures and the Book of Sacred Poetry were issued. In 1837 the Christian Brothers, who with several teaching orders of nuns had been recognised by the Board under the usual conditions, withdrew from the National system to evolve a successful class of urban schools in which education should not be non-sectarian. The Pope's influence alone warded off a crisis about 1840 when the Board rejected the bishop's request for a larger jurisdiction in Catholic districts.

In the social confusion and distress of the next ten years, the Catholic church's opposition lay dormant, but with the appearance of the "Catholic University Question" about the middle of the century it awoke, and it has never been so violent as between 1850 and 1860. The Catholic church could not free itself from the old fear of proselytism. And Archbishop Whately's diary assures us that proselytism was not foreign to Protestant plans. "If we give up

the National system we give up the only hope of weaning the Irish people from popery." The insistence upon the Scripture Selections, the Book of Sacred Poetry, and particularly upon Archbishop Whately's *Evidences of Christianity*, in the combined literary and moral instruction could scarcely be expected to allay this fear in the presence of an oft-repeated belief that "Protestantism generally feels that in the Scripture Selections lies her sole hope of undermining the Catholic faith." The open hostility of the Catholic church during these ten years effected certain results. The Scripture Selections and the Book of Sacred Poetry were ousted from the schools and in 1853 the Board withdrew its approval of Whately's *Evidences*. Certain regulations were made in behalf of Conventual Schools, and under certain conditions as to equipment and inspection they were permitted to train pupil-teachers. Gradually in exclusively Catholic districts separate religious instruction was introduced in the ordinary school hours and the National Schools became to a large extent denominational schools.

It was in solving the problem of the training of teachers that the Board achieved perhaps its greatest success. There was need of training. Inspector Murray writes in 1833: "To an arrogance and self-conceitedness peculiarly their own, many of the country schoolmasters and mistresses unite an innocence of everything except reading and writing, with occasionally a smattering of mathematics. I found few who knew anything of English grammar; fewer still who were acquainted with geography. . . . I could not but regret the wretched judgment displayed in communicating the little they knew." Stanley's Letter suggested the creation of Model Schools, vested in and fully controlled by the Board. Six of these

were erected by the Board in 1847. To-day there are thirty, attended by 10,000 pupils. As developed in the larger centres, Model Schools consist of boys' and girls' departments, and kindergartens, with teachers' residences, dormitories for the students, servants' rooms, playgrounds, and of late years, model farms, gardens, or workshops. The course of study includes the obligatory subjects of the National Schools with such secondary branches as geometry, algebra, Latin, French, etc. On the professional side the Model Schools train monitors. From the monitors are selected the pupil-teachers, who, after a six-months' course, in part professional, graduate into the regular Training Colleges.

The first Training College was established in 1833-5 in Marlboro Street, Dublin, under the exclusive control of the Board. It was a residence school of one to two years' courses, with both male and female departments, open to all creeds on equal terms. Attached to it was a practice-school for the teachers-in-training, and, in later years, a model farm and manual-training shop. "Combined literary and moral with separate religious instruction" was the great stumbling-block here as elsewhere in the National Schools. The Anglicans would have none of it, and the condemnation of the Catholic Synod at Thurles in 1850 turned the Catholic students away from its doors. To meet pressing needs the Board created in 1856 a small staff of "organisers of schools" whose duty it was to traverse the country organising schools and instructing teachers. Opposition to the Training Colleges persisted, and in 1881 the Anglican students-in-training were permitted to lodge in the Anglican Training College at Kildare Place. The Lord-Lieutenant followed up this relaxation of the rules by a proposal to establish denominational

Training Colleges after the English model. The Commissioners agreed to this on the understanding that these Training Colleges should be vested in individuals rather than in committees, as in England. At once the Catholic clergy established two Training Colleges and vested them in the Archbishop of Dublin. The Anglicans were not tardy in establishing another in Dublin, vested in their Archbishop. One great difficulty remained. The Commissioners' College in Marlboro Street still existed, open to all creeds, and maintained wholly by the Board. The denominational Colleges received from the Board nothing for the erection of buildings and ultimately only three-quarters of the current expenditure. The agitation persisted in by the churches concerned resulted in the relief measures of 1890. This relief, involving annual grants for the maintenance of students-in-training at any Training College, and bonus grants for long attendance and scholarships, together with block-grants to cover the cost of buildings, placed all Training Colleges on the same footing.

The course of training at the six Colleges (lately increased from four) includes an admission examination, and annual inspection and examination under the Chief Inspectors of the Board. The course of study, which extends over one or two years, embraces the theory of teaching, and the ordinary elementary branches, with agriculture, higher mathematics, and higher science for men, and the kindergarten principles, domestic science, and needlework for women.

But the problem of efficient teaching could not be solved without inspection. At first the Board appointed four Inspectors, of whom two were Catholics. Subsequent to the Inquiry of 1854 these were increased to six Chief Inspectors, and beneath them are

twenty-nine Sub-Inspectors, and seven Special Inspectors, with several Inspectors' Assistants. For years all Inspectors were appointed after examination by a Special Civil Service Commission, but, in deference to the great need of professional experience in the Inspectors, more recent changes provide for the promotion of certain grades of teachers to the ranks of the Sub-Inspectors. It is the duty of the Chief Inspectors to inspect the Training schools, to examine the teachers-in-training, and, in a general way, to report upon great educational movements. The Sub-Inspectors, acting under the Chief Inspectors, enforce the Commissioners' regulations and advise professionally both teachers and local managers.

The Board's progress in the solution of the salary problem has not been remarkable. The Commission of 1828 suggested a minimum local contribution of £10 to the teacher's salary; in interpreting Stanley's Letter the Board asked for £12. In the great poverty of the rural districts it was impossible to enforce even this amount, and recognising this the Board increased, in 1839, its own salary grant to £20 for male teachers and £15 for female, and in 1860 to £52 for males and £42 for females. In addition the Loans Act of 1875 encouraged local managers to provide residences for the teachers. In the same year permission was given the Poor Law Guardians to augment the results-fees out of the rates, but this permission has rarely been acted upon.

The results-fees movement—which must be mentioned here—had its origin in England. Fortescue, the Irish Secretary, suggested its application to Ireland. Sir Patrick Keenan's modification of the English plan was endorsed by the Powis Commission, and in 1871 and 1872 introduced into Irish education.

Keenan's plan respected the personality of the teacher, inasmuch as it retained for him a personal salary apart from "results." The results-fees were bonus additions to the regular salaries and varied with grades and subjects. Indirectly this Irish system of payment-by-results, as developed later by the Inspectors, exerted, in some ways, an excellent influence. It encouraged advanced study among the teachers, and prolonged the school attendance by a year. It greatly enlarged the school course. But these happy results scarcely offset the over-pressure, the unholy motive, and the life-in-death paralysis of original effort that resulted from the universal scramble after fees.

In 1879 the Pensions Act appropriated £1,300,000 from the funds of the disestablished Irish Church as the nucleus of a pension fund for teachers. In 1890 the Local Taxation Act provided for additional payments to teachers; and in 1892 the Crown, in practically abolishing school fees, voted a larger crown grant to the teachers' salaries. Until recently the salaries consisted of the Crown grant, which varied with the teachers' professional standing, length of experience, and success, the results-fees, and local gratuities, school pence, and rates (if any). The changes of 1900 in abolishing results-fees classified the teachers in three grades with a fixed salary for each grade, and made professional qualifications, seniority, and efficiency under inspection, the basis of promotion from grade to grade.

The problem of school buildings has been scarcely less difficult than that of teachers' salaries. "I found schools," reported the Inspector for Leinster in 1830, "in stables, in unroofed and seatless chapels, in the kitchens of teachers, and in one instance, the master's house being too small to hold a sixth of

the boys and girls, the desks and forms were placed at the shady side of a house and shifted from wall to wall as the sun or wind became too strong." Stanley's Letter proposed that the Board of Commissioners meet two-thirds of the cost of erection of new buildings. Experience has forced it to meet practically the whole cost, especially in the rural districts. It has also built the District Model Schools and the Training Colleges. By careful inspection and distribution at cost or half-cost it has steadily improved the school apparatus and appointments. But after all, progress has been slow. The country, especially in the rural districts, is poor, and the people have grown indifferent in the presence of the Board's willingness to assume local burdens. As late as 1875 the state offered loans for the erection of teachers' residences, and in 1884 for the erection of non-vested schools. In 1889 it increased the grants to the school building funds in general, and in 1892 it provided for the compulsory acquisition of school sites.

In solving the problem of school attendance Ireland has been more unsuccessful than, perhaps, any modern state. The poverty of the country will go far to account for this. The dominant agricultural interest of the country, with its opportunities for child employment, will go farther. But more potent causes still are the uncertainty and suspicion bred of religious differences. School fees were a hindrance until the Irish Education Act of 1892 practically commuted them for an additional crown grant. In the same year attendance was made compulsory in boroughs, towns, and townships, but in the absence of attendance-committees to enforce attendance the law was inoperative. Even the authority to create these committees, granted by the local

Government Act of 1897, has not been freely utilised, and the attendance-percentage of Ireland is at least one-quarter less than that of England or Scotland.

The National Board has done much to solve the text-book problem. "In 1830 school instruction appears to have been chiefly individual; every child brought to school the book furnished by the domestic library, and in his turn read from it to the teacher. One might read the Bible, another the adventures of a highwayman, the third a loose romance. The efforts of the Kildare Place Society and the Catholic Book Society did not possess strength or scope enough to banish objectionable books." It remained for the Board of Commissioners to banish them. It began wisely. Its authority was limited practically to the approval or disapproval of books in use. Such books as were worthy it sanctioned temporarily; others it edited and printed itself. These latter books were distributed gratis or at half price and, with the assistance of the inspectors, were gradually introduced into the National Schools. The books themselves were uniform in character and well-graded, and contained nothing "inimical to Christian faith, or morality, or patriotism." Their excellence found them ready sale in Great Britain and the colonies, and this fact, together with their publication at public expense, aroused in later years the enmity of London publishers. They protested to Lord John Russell's government, and as the result of lengthy negotiations, the Board of Commissioners agreed to offer its copyrights to all publishers on equal terms, and to limit its own sales to the National schools of Ireland. Later still the Board abandoned control of even the copyrights, and to-day it contents itself with issuing a formal but very generous list of "approved" text-books. Through its cheap distri-

bution, however, it still has a monopoly of the school-book trade of the island.

Years have altered the organisation of the Board itself. Beginning with seven members, of whom two were Catholics, it was increased in 1838 to ten, and in 1852 to fifteen, of whom six were Catholics. Shifting political conditions and perhaps some sense of justice forced a reorganisation in 1861 which gave ten out of the twenty representatives to the Catholic church. Among the members the Resident Commissioner, a paid officer of the Board, stands out as the chief executive officer. The greatness of the men who sit on the National Board and the patience and prudence which characterise its proceedings do not exempt it from attack. Its members are not educational experts. Even if its traditions permitted it, it has no official body from which to seek professional advice. In the presence of religious and social difficulties its proceedings are conducted in secrecy and, cloaked by this secrecy, its decisions are often unintelligible.

The movement in behalf of technical training induced the Government to create in 1897 a special Commission on Manual and Practical Instruction. It was to the report of this Commission, combined with the growing conviction of the evils of the payment-by-results system, that Ireland owes the changes in the National Code of 1900. By this Code, as we have seen, teachers are to be classified and paid on the basis of experience and efficiency, and fee-results are practically abolished and replaced by capitation grants, whilst the whole elementary curriculum has been recast. To arithmetic and the English subjects, which have hitherto formed the obligatory curriculum, are now added kindergarten and manual instruction, drawing, object lessons, elementary

science, singing, drill and school discipline, with cookery, laundry work, and needlework for girls.

In the failure of united and secular education in Ireland, the National Board has created a type of primary school which is denominational as in England, but in all other respects is foreign to the English ideal. It has not been evolved naturally. It was conceived abroad and applied ready-made to Irish conditions. Like all ready-made institutions it approaches perfection in form and theory, but lacks spontaneity and flexibility. In its one great purpose, to unite all Irishmen in a oneness of feeling and effort, its failure has been greatest. Created to remove religious differences, it has probably increased them. Moreover, in practical things its success has not been striking. Its continuation classes, its night schools, its pension funds have failed. Four-fifths of the school managers are self-appointed clerics, from whose decisions the teacher has no redress. School methods are obsolete or inadequate; scarcely one-half of the teachers are trained; the school accommodation is unsatisfactory; the percentage of Irish illiterates is large; and the educational standard of the masses in Ireland is lower perhaps than elsewhere in the British Isles. But despite all this the National Board has done a noble work. It has given system and organised effort where all was disorder and neglect. Amid poverty, indifference, and religious exclusiveness that do not repeat themselves elsewhere in Western Europe, it has successfully met the first demand of modern democracy,—a training in the rudiments of learning for all classes and creeds.

Elementary Technical Training.—The National Board recognised from the beginning the need of combining literary with technical training. Its pro

posals to create a Training College in Dublin was supplemented by a recommendation to affiliate with such Training College a School of Industry in which should be taught agriculture and certain forms of handicraft. In 1837 agriculture was added as an optional subject to the National School course, and two agricultural schools, one in Donegal and one in Tyrone, were aided out of the Board's funds. About the same time the Inspectors were instructed to encourage the teaching of sewing, cookery, and domestic science to girls in the National Schools. The great famine of 1847-8 drew the Board's attention to technical training. Drawing was added to the National School course, larger grants were offered to the Agricultural schools, and in 1850 sewing and knitting were made compulsory for girls. In 1838 the Board established the Model Farm and Garden at Glasnevin (now the Albert Model Agricultural College) near Dublin, as a species of Agricultural Normal Training College, and added in 1853 a second Model Farm and Dairy near Cork. Besides these, the Board encouraged the National schools to lease small farms or gardens in their respective neighbourhoods, and the number of such farms increased to 228 in 1875. In 1873 agriculture became an obligatory subject in the upper classes of rural schools, and later the Board adopted a carefully elaborated domestic course for girls. It remained for the Commission of 1897 to point out the futility of these efforts at technical education. Wherever the Board has gone farther than recommendations it has been extravagant, or has substituted book-work for practice. It has trusted to courses of study, examinations, and results-fees rather than trained teachers and equipment. There was no manual training, no wood or metal work, no physical

exercises, no kindergartens, no elementary science, little drawing, and little singing. The work of the Science and Art Department has been scarcely more valuable. It has aided but two schools for manual training and but ninety schools for drawing, and these have been almost exclusively the schools of the Christian Brothers.

Secondary Education.—The story of secondary education is not a noble one. "It is a record of poverty, of abused endowments, and of numerous inquiries preceding tardy reform." The story begins early. When primary education was organised in 1831 to meet the needs of the masses, secondary education already had form and substance in the classical training of the endowed and church schools for the classes, especially of the Protestant faith. As early as 1791 a Royal Commission on Endowed Schools, protested against the misuse of endowments and urged the creation of a Board of Control. In response to this, an Irish Act of 1800 created the General Commission of Charitable Donations and Bequests, with authority to supervise the distribution of the charities of the country. Catholic discontent forced a reorganisation of the Commission in 1844 with larger Catholic representation. At best, however, the responsibilities of this Commission were not extensive. In 1858 it did not control an income of £3,000. Scarcely less effective was the response in the creation in 1813 of an unpaid and non-sectarian Board of Commissioners of Education in Ireland to direct the endowed schools. The duties of this Board were carelessly defined and as carelessly performed.

Despite the excellent reports of Wyse's Select Committees on Education (1835-38), the history of reform in secondary education between 1830 and

1850 is almost a blank. The sympathies as well as the financial energies of the people were with the newly-created National Schools. Meanwhile overpopulation, fever, and famine depleted the revenues of the schools. Mismanagement and neglect dissipated what was left. In 1850 the income of fifty-four of the largest endowed schools did not exceed £15,000, while ninety towns of 2,000 souls or over were wholly without organised secondary instruction.

The meagre curricula of the secondary schools, with the mismanagement of their governing bodies, ran counter to the new spirit of expansion and organisation. The report of the Committee on Endowed Schools of 1858 insisted upon more modern and less exclusive methods in secondary education, and urged such a reorganisation of the Board of Commissioners as would assimilate it in character to the National Board for primary education. But political and agrarian problems barred all progress for twenty years.

Another Commission in 1880 emphasised the recommendations of 1858. The Educational Endowments Act of 1885 created a Special Commission to prepare "schemes" for the supervision and inspection of endowed schools of a secular character. In its eight years of existence this Special Commission prepared 200 "schemes" which were ratified by the Irish Executive. These schemes made provision for a new Board of Commissioners of Education in Ireland which, in part nominated and in part representative, should possess the same jurisdiction in secondary education as the National Board possesses in primary education. Under this Board, local Boards, representative of the various creeds, are the local managers of secondary schools; and, as might be ex-

pected, these local Boards are to be found chiefly in Ulster. With the close of the century, Ireland possesses about 475 of these secondary schools, attended by 25,000 pupils.

The history of secondary education in Ireland embraces more than the history of these endowed schools for the classes. Here, as elsewhere throughout the modern world, primary education for the masses has been steadily expanding into the sphere of secondary education. In 1837 the National Board promised the creation of a secondary system whose curricula should include both the literary and technical branches. In its fear lest popular attention should be withdrawn from this technical side of education, the National Board denied in 1867 the urgent requests of the Catholic bishops that classics and French be added to the ordinary subjects of the National Schools. The Powis Commission of 1868-70 at last forced the Board to act, and in 1873 classics, French, and German, certain branches of higher mathematics, and physical science were added to the optional courses of the elementary schools.

The Irish government was now exposed to two hostile forces. The National Board was demanding larger state aid for the advanced or secondary instruction of the masses in connection with the National Schools, and the middle classes of the island were insisting upon increased endowments for the secondary and classical schools. The government compromised by creating in 1878 the non-sectarian Board of Commissioners of Intermediate Education, with control over certain revenues from the Church Disestablishment Fund, and (after 1890) from the Local Taxation Act fund. These revenues were distributed annually on the basis of uniform examinations in secondary subjects as prizes to pupils and as pay-

ments-for-results to school managers. These secondary subjects included classics, modern languages (with Irish), mathematics, physical science, and the commercial branches. The competition was open to all schools, endowed or National, confessed or secular, in which the conscience clause as to separate religious instruction was observed. The competition itself became so keen as to involve all secondary and many National schools, and to involve, if it did not distort, the best energies of the teachers.

Between 1890 and 1900 the opposition to this Intermediate Board assumed definite form. The Board itself, a crown-nominated body of seven members, consisted of bishops, jurists, and university professors. These lacked expert knowledge, had no inspectorial authority by which to acquire it, and were disinclined to seek it through the Teachers' Associations. Moreover all Ireland, as all England, was now awake to the vast evils that attended upon the payment-by-results principle. Not the least of these evils, as developed in Ireland, were the unequal distribution of the grants, the continued indifference towards the academic and professional training of the teachers, and the unfortunate neglect of commercial, industrial, and scientific branches in favour of the purely literary side of secondary education.

The Royal Commission on Intermediate Education of 1898 was the outcome of this opposition, and the Acts of 1900 were the government's response to the Commissioners' Report. These Acts authorise the Intermediate Board (to which might now be added five members with expert knowledge) to organise a system of inspection, and prescribe the new conditions of grant-distribution.

So far as these new conditions have been announced, they include a capitation in lieu of an ex-

amination grant, and a general and class test of efficiency in lieu of the competitive and individual test. The preparatory, as the first of the four grades of Intermediate schools, will retain its old character, but throughout the remaining three grades of Intermediate schools, and side by side with the grammar course of the prospective university student, shall henceforth run a modern course for those whose interests are in agriculture or commerce. The future bears with it hopes of freer scholarships, of a consultative committee of experts, and of a special register of secondary teachers, dim as these hopes may be in the presence of poverty, official jealousy, and the Catholic University embroglio.

In the domain of secondary education the Science and Art Department of South Kensington has established a library and museum and organised the Royal College of Science in Dublin. Beyond this it has contented itself with unimportant grants to certain secondary subjects, but even here its unpopularity in Ireland has forced it to practically withdraw in favour of local action under the Technical Instruction and Public Libraries Acts. In the assumption in 1899 of control of technical education in Ireland by the newly-created Department of Agriculture and Industry, with its central advisory committee on education and its representative local authorities, the active duties of the Science and Art Department practically ceased. In their poverty Irish educationists have as yet but played with the question of technical education.

Higher Education.—In 1800 there were two Universities in Ireland, the University of Dublin, which was one and the same with Trinity College, and the University of Maynooth. Dublin with its faculties of Law, Medicine, Theology, and Arts, was open to

all creeds, but Protestants alone, particularly Anglican Protestants, might become its professors or hold its scholarships. Its courses in the humanities were worthy of its long history, and, despite the fact that the majority of its undergraduates did not attend the university lectures, its matriculation and graduation examinations were genuine tests of scholarship. Maynooth was the Catholic university,—which in 1817 was to become in name what it had always been in fact,—the Roman Catholic divinity college of Ireland.

The first stirrings of the new industrialism in the creation in 1841 of a School of Engineering in federation with Trinity College and in the proposed creation of colleges in Manual Instruction and Agriculture were soon smothered in the rising tide of religious feelings. The hopes and influences that followed in the wake of Catholic Emancipation dominated the history of higher education in Ireland for fifty years. In 1834 Shiel strove, a little before his time, to remove all tests from offices and scholarships in Trinity College. A special parliamentary committee of 1838 wished to offset the exclusive Protestantism of Dublin University by the creation of a new and secular university. In 1845 the government increased and consolidated the Maynooth grants. In the same year Peel announced the plan of a new university. It was to consist of federated, non-sectarian colleges at Belfast, Cork and Limerick, well-equipped by the state and endowed each with an annual revenue of £7,000. In 1849 these colleges, to be known as Queen's Colleges, were duly founded with faculties in Law, Medicine, Arts, and Engineering, and in 1850 were affiliated for examination and degree-conferring purposes with the newly-created Queen's University of Ireland.

But it was no longer possible thus to stay the rising tide. Henceforth the great problem of higher education in Ireland was not a problem of forms and systems of education, but a problem of religion. O'Connell led the masses as the church directed, and the church would not countenance a secular university. The Pope, too, condemned Peel's scheme. Catholic youths were dissuaded from attending the new colleges. The synod at Thurles in 1850 decided to found a separate Roman Catholic university at Dublin, and Dr. Newman,—the Cardinal of later years,—was invited to Ireland to organise it. This new Catholic university had an unhappy existence. The government declined to grant it a charter and it could not confer degrees. It depended for maintenance upon private subscriptions, and these failed it in so poor a country as Ireland. Even the students were wanting, as the Catholic youth were without efficient preparatory schools. Finally Newman withdrew in despair. But its failure merely emphasised the Catholic opposition to a secular university and the Catholic resentment at inequality of treatment.

The persistent demands of the bishops for equality of treatment at last brought a response. In 1866 Lord John Russell's government would admit the new Catholic university into Queen's University as a federated college coequal with the Queen's Colleges, but the courts when appealed to declared the proposal illegal. The Powis Commission (1868-70) acknowledged in part the justice of the bishops' claims, but was unable to discover a basis for compromise.

Disraeli offered the Catholic University the same state recognition as was enjoyed by Trinity College, but as the offer made no mention of endowment and did not provide for episcopal control, it came to naught. Gladstone's Bill of 1873 to abolish Queen's

University, and to federate the Queen's Colleges, Trinity College, and the Catholic University under Dublin University as the one examining and degree-conferring body, also failed because it made no provision for endowing the Catholic College. In 1880 Disraeli resurrected Lord John Russell's Bill of 1866 and, with the substitution of a newly-created and endowed Royal University for Queen's University, the new bill became law. Here, despite the Church's attempt in 1882 to organise a separate Catholic University which should embrace the six more prominent Catholic colleges in Arts, Medicine and Divinity, and despite discussions, petitions, and the diverse influences of politics and religion, the Catholic University question still rests.

Meanwhile, to Trinity College itself, this protracted struggle was not an unmixed evil. It forced its governors to put their house in order. Cumbersome and extravagant features were lopped off. Archbishop Whately's Commission of Inquiry of 1851 initiated great reforms between 1855 and 1860 in its methods of conferring degrees, of ordering examinations, and of appointing fellows. In 1873 all its religious tests were abolished, and in 1878 a Commission insisted upon secularising its courses of study. In this non-sectarian form its general training in Arts, Law, and Medicine has been accepted by the various Protestant bodies in Ireland, but Methodists and Presbyterians still look to colleges in Belfast and Londonderry for special training in Theology.

As might be inferred from its poverty and from the inadequacies of its intermediate education, Ireland has not provided generously for the higher education of women. The Ladies' College, Belfast, founded in 1859, and the Queen's Institute, and

Alexandra College, Dublin, founded in 1861 and 1866, respectively, make more or less satisfactory efforts to meet the needs of Protestant women, while the few Catholic women who seek higher education must content themselves with the restricted training of such conventual schools as St. Mary's University College and the Loretto High School. Since its organisation women have enjoyed all the privileges of the Royal University, but it was not until 1896 that they were admitted to the ordinary examinations of Trinity College. Even yet they may not attend its lectures or receive its degrees.

The great university movements of recent years have scarcely been felt in Ireland. The Irish universities have little influence upon secondary education and no influence upon elementary education. Scientific and technical training, commercial courses, university extension lectures, these are for Ireland the university questions of the future. The questions of the moment have to do with the limitations of a purely examining university such as Dublin, the evils of the ultra-protestant traditions of Trinity, and the great need of higher education for the Catholic youth of the country. Lecky and Bryce, Morley and Balfour have advocated the endowment of a Catholic university, and the British people are in a general way convinced of the inequality to which the Catholics are subjected. It remains to prove to the British rate-payer that, uninfluenced by their church, the Irish people would refuse to accept Trinity College or the Queen's Colleges, and then to satisfy him not merely with guarantees of efficient instruction in the new university, but also with guarantees of efficient lay control.

CHAPTER IV.

SCOTLAND.

Primary Education.—Macaulay declared the common people of Scotland in 1800 to be superior in character and intelligence to the common people of any country in Europe. The British races of 1900 frankly acknowledge the dominance of the Scot in the private and public life of the Empire. “Beyond contradiction,” says the encyclopædist, “Scotland is one of the most striking examples of the action which the diffusion of knowledge exerts upon the morality and well-being of nations.”

The secret of the superiority of the Scot lies,—if we may be guided by discussions among British publicists, and by the nature of successive educational reforms in England and Ireland,—in the school system of Scotland. Early, much earlier in Scotland than elsewhere in the British Isles, the state took up the task of organising public instruction, and from the first, King, Church, and people worked with one accord. The universality of the Church of Scotland, and its large tolerance in matters of learning, precluded the bitter rivalries of creeds. The unity among all classes of Scotchmen rendered impossible or unnecessary the prejudices and discouraging compromises that have always marred English education. And this tolerance and this unity were accompanied by a national enthusiasm for learning, which in in-

telligence and self-denial stood without a parallel in Europe. To this enthusiasm Scotland owed not merely her persistence in maintaining secondary and higher education side by side with elementary, but also her determination to make education free, and, so far as possible, universal. To it she owes, too, the fact that her school curricula are flexible, her school accommodations are complete, and her school attendance is the best in the British Isles.

Scottish, like English, education, began with the Church's schools. But even before the Reformation a few lay schools had appeared as Latin schools in the chief towns and Lecture schools in smaller places. All schools, clerical or lay, were more or less subject to the Church's supervision, and, true to this tradition, Knox outlined a scheme of education for his Reformed Church. This scheme included a school and a teacher of the rudiments in each of the less populous parishes, Latin schools "in towns of any reputation," and colleges "in every notable town." The scheme was complete, but in the spoliation of the available revenues—those of the Old Church—by the nobles, it was utterly inoperative.

Under the early Stuarts and during the Commonwealth, bitter religious struggles distracted public attention, and only the public spirit of a few burghs and barons saved the good name of Scottish education during the first three-quarters of the seventeenth century. The era of the Union, ushering in toleration, political stability, and a new commercialism, turned the Scottish mind towards popular instruction. In the Act of 1696 we have the Magna Charta of Scottish education—if not the Magna Charta of all British education. This Act directed the heritors or landowners to provide a school in each parish, and to pay the teacher a fixed salary. In default of action

by the heritors the presbytery should summon the Commissioners of Supply of the shire to act and saddle the heritors with the cost. Apart from his authority as head of such presbytery, the parish minister controlled the methods of instruction, the subjects, and, in a general way, the teacher. Under this Act schools were at once opened in the wealthier and more populous parishes of the south, and after 1745 they began to appear even in the Highlands. When the influence of the French Revolution, which gave school systems to every country in Europe, reached Great Britain, it found Scotland in possession of a system efficient, comprehensive, and well-nigh universal. And if the nineteenth century has brought reforms to this system, these reforms have been but the expansions and corrections of the details of the Act of 1696.

An Act of 1803 emphasised again the significance of the parochial unit of authority. The heritors must establish and maintain a school in every parish, and in a large or populous parish an additional or side-school. The Church's authority remained undiminished. The presbytery defined school hours and duties, and examined, licensed, and even dismissed the teacher, while the parish minister supervised the teaching, and, acting with the heritors, appointed the teacher.

Apart from an acceptance of the Confession of Faith and of the formularies of the Church of Scotland, the teacher's license was made dependent upon his worth of character and his scholarship, and the permanency of that license was universal. The Act increased the teacher's salary, gave him a house and garden, and legalised his claim to the school fees. As a well-to-do freeholder, he now ranked, in some sense, with the heritors who maintained the school, while his learning and his personal prestige won him

a social influence scarcely inferior to that of the minister himself.

Lord Brougham's commission of 1818 bore indirect testimony to the results of these Acts of 1696 and 1803. England, the Commission urged, should imitate Scotland's sacrifices in behalf of education, her faith in the parish schools for the masses, and her freedom from religious partisanship. But Scotland herself was not content with her schools. Despite the Act of 1803, the parish school was not yet universal. The Church wielded too large an authority in school affairs. Unrestrained by a definite curriculum of studies, the parish teacher often dissipated his time and energies upon advanced or secondary work with special pupils. The first of these defects called for early consideration.

Parish schools were naturally foreign to the social organisation of the newer towns where proprietary or private schools flourished; they were inexpedient or impossible alongside of the existing burgh schools or academies of the older towns. But where most needed—in the remoter districts of the Highlands and the Islands—the lack of parish schools was greatest. In these districts, the Reformation, in confiscating Church properties and revenues, had been a great calamity. Schools were few, and in scarcely any was English taught. In Argyll ninety-five per cent. of the children were illiterate, and Argyll was not the most backward county. The Society for the Promotion of Christian Knowledge had begun in the last century to open schools in the most neglected districts. It now redoubled its efforts. And to supplement these efforts a Special Committee on Education was appointed by the Assembly of the Church of Scotland. But both Society and Committee depended

upon private munificence—and the results for the moment were meagre.

The Assembly's interest in popular instruction was a blessing in another direction. Its Committee on Education could not fail to note the growth of denominational schools in Scotland, especially Episcopal, and Roman Catholic, and could not fail to recognise in the control of parochial education by the presbytery a condition that must encourage that growth. Prompted by a large public spirit, it strove to minimise the presbytery's authority. Teachers were enjoined not to enforce religious instruction upon all. Conscience clauses were inserted in new school charters, and were honestly observed in the school rooms. The results were to be expected. Roman Catholics generally, and Episcopalians in many districts accepted the parish school. And from this time forth, Voluntary schools have never secured a firm hold upon Scotland, nor have Church issues ever played an important part in Scottish education.

The history of a national system of education generally has much to say about the evolution and definition of local and central school authorities. Prior to 1870 the local school authority in England was traditional and voluntary—the parish church, or an association of citizens. This authority had no rating powers and to evolve such rating powers has been the purpose of educational legislation in England during the last thirty years. Scotland's local authority, on the contrary, had already for two centuries enjoyed a statutory existence, and in the obligation to maintain the parish school, the land owners had long been subject to school rates. The first step towards the organisation of a central school authority for Great Britain was taken in the crown grant of 1833. Scotland's share in these early crown grants for

education was not received, however, until 1834. In 1837, 1838, and 1839 she received special aid for school buildings in the Highlands. The second great step was taken in 1839 in the creation of the Committee of the Privy Council on Education. Thereafter for thirty years English and Scottish systems of elementary education were subject to the same central authority and, so far as that central authority was concerned, should have developed along the same lines.

But they did not so develop. The English Voluntary Schools with no fixed source of revenue, gladly accepted state grants with state inspection and supervision, and flourished despite their denominational characteristics. On the other hand, the parish and burgh schools of Scotland, relying mainly upon local rates, grew rapidly at the expense of the voluntary schools. Some of them even declined the state's aid because it carried with it the state's inspection, and all of them resented the state's interference in the daily conduct of the school. Between 1834 and 1872 Scottish elementary education received the usual state grants toward buildings, salaries, and the training of teachers and pupil-teachers, but these grants were never made on the capitation basis; and to the very last the independent Scottish dominie refused to be bound by the courses of study of the Revised or any governmental Code.

Moreover the decrease in denominational schools was accompanied by the rapid disappearance of all denominational characteristics from the parochial schools. Even the Disruption of the Church of Scotland tended to accelerate their disappearance. The Free Church was decidedly democratic. Taught in the hard school of their own recent experiences, its schoolmasters were willing to forego all special form-

ularies; relying upon the Conscience Clause its leaders were anxious to leave religious instruction to the option of the local authorities.

And the Act of 1861 did more than the Disruption to accelerate this disappearance. It emphasised the growth of the civil authority at the expense of the Church. By the Act of 1803 the parish minister or his presbytery examined, supervised, and dismissed the teacher, while the heritors appointed him, in name at least. The Act of 1861 transferred the right to examine to the universities; curtailed the Church's right of supervision, and in a tentative way authorised the heritors and sheriff to appoint and dismiss. The teacher, meanwhile, grew in importance as a member of the body politic. He was now a servant of the state. His salary was larger and was collected by statutory assessment. Examined by the universities, and often a student at the universities, he was the representative of a learned profession. Even his duties were henceforth to be considered more largely from the secular side. A simple declaration of a Presbyterian creed was to be accepted in lieu of the Confession of Faith and the Presbyterian Formula.

The Act of 1861 was based upon a Special Report of Inquiry of the same year. This Report spoke out earnestly against the proprietary, subscription, and private-venture schools of the day. They were few in number, it is true, but exceedingly unsatisfactory, especially the last class, in character. Crowded and unhealthy rooms, ignorant and brutal teachers, and a meagre school curriculum were the earmarks of the private school as well in Scotland as in England. Few Voluntary schools were left. The tolerant spirit of the Church of Scotland had encouraged the quiet absorption of the Roman Catholic and

Episcopal schools into the general parochial system. The Society for the Promotion of Christian Knowledge still maintained, unaided by the state, its 200 schools in the Highlands and Islands. The Special Committee of the Assembly of the Church of Scotland maintained, with state aid, 500 good elementary schools. Better still were the similarly organised 600 schools of the Free Church.

Immeasurably more important than these, were the regular parochial schools. These were universal in distribution, and neutral in character. Unlike the Voluntary schools of England they appealed to no creed, or class, or sex; to neither rich nor poor. Nor were their courses of study as meagre as those of the English schools. They trained not merely for the shop and farm, but for the universities and the learned professions. In the light of this connection with the universities and of the prestige of age and tradition, the parish schools stood forth in a unique sense, as the centres of scholarship and culture in Scotland. And the Scotch dominie was of a piece with his school. He possessed great local dignity and initiative, and his educational outlook was in no wise narrow. Little interested in questions of creed, he loved learning and had his own way of imparting it. So it was that he accepted Lowe's Revised Code only so far as it improved the attendance and tended to improve the character of the school managers. He resisted state inspection and formulated his own courses of studies. He devised his own methods, made his own rules, and organised his school after his own heart. He trained for the universities and submitted so rarely to the state examinations as to make it impossible to base state grants upon the results of such examinations.

While the Report of 1861 was on the whole com-

mendatory, it did not altogether overlook the defects in Scottish schools. The Report of the Argyll Commission, issued in 1867, brought out these defects in greater detail. Eighty per cent. of the parish schools were efficient; twenty per cent. were deficient in buildings, teachers, equipment, and revenues. While the desire for learning was general among the shepherds and small farmers, and while that desire grew into a positive demand among the tradesmen, the ability to read, and especially to write, was in no sense universal even among these classes. The Highlands and the Islands were still badly served with schools, and so were the Irish settlements of the south and west, and in a general way the mining, fishing, and crofter districts. In fact, one-sixth of the child population of the country never attended school. Even where the school accommodations were to all appearances complete, the Commission found defects. Attendance was irregular, courses of study were pretentious, inspection by the state was either unsatisfactory or impossible, and the administration of schools by local authorities lacked precision and efficiency. In the matter of religious teaching, defects in the existing system were slight. The Conscience Clause was generally respected, but denominationalism survived in a few Voluntary schools, and bore fruit in some "overlapping" of school agencies, and in some sectarian bitterness, especially in the north. More significant because more universal than this sectarian bitterness, was the Church's jealousy of the expanding authority of the laymen. Its resentment at the partial loss of the right of supervision, and at the threatened loss of control over the religious creed of the teacher, together with its fear of the introduction of English methods, gave uncertainty and doubt to the whole school machinery.

Taken in conjunction with the general movement in the British Isles these Reports of 1861 and 1867 formed the basis of a great Education Act in 1872. On the one hand, this Act (known in history as the Young Act, in grateful recognition of the Lord Advocate who piloted it through Parliament) modernised the law of 1696, and on the other hand, it advanced the organisation of elementary education in Scotland far beyond the limits defined for England by the Forster Act of 1870.

The Young Act divided the counties into districts which corresponded generally with parishes or burghs. Each district should create a School Board by triennial election by owners and occupiers. Each Board should control all schools within the district which were organised under Acts of Parliament, should accept control of such voluntary or private schools as might seek recognition among the state-aided schools, and should organise new schools where needed. Thus these Boards assumed the authority hitherto wielded by heritors, ministers, and presbyteries in parishes and by municipal councils in burghs. They exacted rates from their districts through the ordinary municipal machinery, and out of these rates they provided maintenance, paid salaries, and even aided poor parents in their fees. They engaged and dismissed teachers, supervised buildings and instruction, and enforced attendance. About the matter of attendance, the law was unusually definite. Subject to the usual exemptions for satisfactory courses completed, parents must direct the attendance of their children between the fifth and thirteenth years, and in case of neglect, the Board might enforce attendance with penalties upon the parents. It must be noted, however, that this enforcement was optional with the Board.

As the central and independent executive body to apply the Act, and to organise the local Boards, a Board of Education was to be created at Edinburgh. The local School Boards—whose existence was obligatory—must report to the central Board upon deficiencies in school accommodation in their districts, and the central Board in turn was empowered to enforce provision for these deficiencies upon the local Boards and to aid that provision by grants, especially for school buildings. With the gradual removal of deficiencies, the usefulness of the central Board disappeared. It was dissolved in 1878.

The Act created also a permanent central authority in the Scottish Education Department. This Department was subject to the same Committee of the Privy Council on Education acting under the same President as the English Department, but in their chief executive heads, in organisation, and in administration, the two Departments were henceforth to be distinct. The new Scottish Department distributed the parliamentary grants for education, and through its rules for distribution controlled in a very indirect way, the courses of study and the time tables. It was to conduct examinations and issue certificates, to enforce the observance of the Conscience Clause; and that it might do these things intelligently, it was to inspect all schools.

The religious aspect of the problem was treated quite frankly. Lay authorities replaced the Church in the general control of the schools, but the existing conditions in religious instruction were not to be disturbed. The Education Department could not inspect or examine, and therefore could not aid the religious teaching of the schools. Apart from the obligation to enforce a Conscience Clause which permitted a student's withdrawal from the religious instruction, and

limited that instruction to the opening or closing hours of the school day, local Boards were free to order what religious instruction they would. It is due to the tolerant spirit of the Boards that the instruction has been almost everywhere limited to the Bible and the shorter catechism.

A cursory glance reveals the striking contrast between this Scottish Act and the English Act of 1870. And this contrast reflects the vastly different conditions which the two Acts attempted to meet.

There was little class distinction in Scotland. Peasant and tradesman, rich and poor, clergy and laity had a common purpose, and to a large extent lived a common life. So it was that all schools, whether of the parish or of the burgh, were equal and national. And just as this unity of purpose had prevented the growth of special, class, or charity schools, so the tolerance of spirit of the clergy had restricted the growth of denominational schools and removed from Scottish education the necessity of time-wasting compromises. Long before 1872 Scottish enthusiasm for learning had prepared the country for compulsory attendance, uniformity in organisation, and broad and liberal courses of study. And this enthusiasm, coupled with the practical sagacity of the Scotchman and his long experience with parochial schools, now made local control, popular representation, and general taxation the necessary conditions of national education.

But this was not true of England. There class distinctions were numerous, and national schools were impossible. The poor attended the Charity or Voluntary schools; the rich the Public or Endowed schools. Indeed, education was, in some sense, for the classes, not for the masses; and the war of creeds was exceedingly bitter. In this war of

creeds and this lack of a common purpose, tedious compromises tell the story of English education. Tolerance had to win its way slowly in the presence of denominational education, and popular control, with obligatory attendance and general rates, was only possible where the Church did not, or could not, act. In fact, where the Scottish law found in the parish and burgh schools a basis for a statutory system of national schools, the English law found its basis in the Voluntary schools and summoned them to meet the deficiencies of the country.

Allowing for this contrast between the Acts of 1870 and 1872 and between the educational conditions of the two countries, the histories of elementary education in England and Scotland during the remaining years of the century are remarkably similar. The Scottish reforms of to-day are always the English reforms of to-morrow.

To provide an efficient way of classifying the state grants, the first need under the Act was a Code. Hitherto the same Code had served both England and Scotland, but its application to Scotland, as we have seen, was exceedingly lax. By a special Scottish Code of 1874—the first after the passing of the Act of 1872—payment-by-results after the Irish, rather than the English model, was introduced. In 1876, in the steady growth of crown grants, the 17s. 6d. capitation grant of England was made applicable to Scotland; and in 1878 special aid was offered the higher-grade classes. The opposition to payment-by-results even in its Scottish form, so natural to a people who regarded the primary school in the matter of curriculum as a miniature university, increased steadily in volume; and in 1886 class subjects were introduced and the lowest two grades were exempted from individual examination. Here

the question of the Code and the crown grants became entangled with the newer problem of free education. After the creation of the County Councils the Treasury surrendered a part of the License and Probate duties in relief of local taxation. A special Act of 1889, passed at the request of Scotland, appropriated the Scottish share of these duties to a rebate of school fees in the lower, or compulsory, grades of the Board schools. This was followed in 1890 by the voluntary application of surplus funds from the Customs and Excise Act to the relief of fees in grades IV, and V. The increasing need of state aid to meet the movement towards free education, together with the increasing hostility towards payment-by-results, led to the abolition of individual examinations by the Code of 1890, and the substitution of "attendance" and "efficiency" grants. To remove further traces of fees—and at the same time to compensate Scotland for her self-denial with regard to the Customs and Excise funds—the crown made a special grant in 1892. This grant was, however, devoted by the Scottish Education Department to secondary and higher education. The Attendance Law of 1893 finally made elementary education absolutely free.

Meanwhile the movement against payment-by-results continued to develop. Departmental circulars of 1898 were followed by a code which practically cancelled the distinction between the classes of subjects of the elementary curriculum, dealt a serious blow at all "specific" subjects, abolished annual examinations by the inspectors, and inaugurated the Block-Grant system. But the elementary curriculum is still unsatisfactory to many Scottish educators. It is overloaded with subjects, it "overlaps" the subjects of other and higher schools, and to some ex-

tent it neglects the elementary subjects proper. The school accommodations are now practically complete. Population is sparse and local rates yield meagre results in Inverness, Argyll, Ross, Caithness, Sutherland, the Orkneys and Shetlands. Special grants were offered these districts in 1892; in 1895 these grants were limited to Ross and Inverness. Following an English Act, in 1897 special aid was granted on the "per pupil" basis to the necessitous Voluntary schools of Scotland. Although the grant was insignificant—only one in every nine schools is Voluntary—it met with much opposition.

The law of 1878 amended the requirements as to school attendance. Local Boards might prevent the employment of children under ten years of age, and might authorise half-day attendance for working children between ten and fourteen years of age. Under well-defined conditions, inspectors' certificates would always exempt from attendance. With the improvements in accommodations and equipment between 1878 and 1883, attendance regulations grew more exacting. The local Boards were placed under an obligation to enforce attendance, and the penalties upon neglectful parents were increased. Subject to exemptions common to the rest of the British Isles and very necessary in Scotland, the compulsory age limit was fixed at fourteen. The year 1891 fixed the compulsory and free attendance age at from five to fourteen years; and the growing recognition of infant schools legalised attendance as low as three years in 1893. With the close of the century Scottish educationists urge an extension of the age limit to fifteen, and protest earnestly against exemptions and particularly half-day requirements. That the attendance records of Scotland are the best in the British Isles, though in no sense equal to those of

the Continent, is a compliment to Scottish enthusiasm for learning, rather than to Scottish enforcement of satisfactory attendance laws.

A word now as to school authorities. In general outline, the organisation of the local Boards remains as defined in 1872. In details, especially as regards functions, the Boards have undergone some changes, notably under the law of 1878. They may appropriate sites for school buildings; they must enforce regular attendance; and they must provide free elementary instruction. Their jurisdiction has been extended. Out of one end of the elementary-school scale have come the infant schools; out of the other end issue in increasing numbers the higher-grade schools. These remain or have been placed under the direction of the local Boards. Meanwhile secondary schools are abandoning much of their elementary work to the local Boards, and Technical Education Committees now work through the same educational organisations. The century closes with a definite pledge by the government to create efficient local authorities to control all forms of elementary, secondary, and technical instruction.

The central authority, on the other hand, has changed much, both in general outline and in details. The Board of Education at Edinburgh was dissolved in 1878, and its functions were transferred to the Scottish Education Department. In 1885 the administrative vice-presidency of the Committee of the Privy Council on Education was replaced by a Secretary of Education for Scotland, and the separation between the two Education Departments was complete. The movement towards the organisation of a new central educational authority found expression in 1898 in the consolidation of the crown grants to education, and their distribution by the one educa-

tional body, and a year later in the reorganisation—as we have seen elsewhere—of the central administration by the great Board of Education Act.

Training Colleges.—The belief that teachers should be specially trained has been persistent with Scottish educationists. Early in the century the clergy began to organise Training Colleges, and Scottish Training Colleges have remained denominational to this day. In 1841 the crown offered special aid to the Normal Schools of the Church of Scotland at Glasgow and Edinburgh. This aid, limited to the maintenance of the teaching staff, was continued and extended to other schools, entailing gradually the right of state inspection, and so far as the teachers-in-training are concerned, the right of general control of the courses of studies. Subject to these limitations, the Training Colleges, through their denominational governing bodies, prescribe their own admission standards, define their own courses of study, appoint their own instructors, and conduct their own schools. All the eight existing colleges admit day-pupils; two make no provision for residence-pupils. All the colleges receive students who seek a general education. Teachers-in-training, who may enter as Queen's Scholarship candidates under conditions similar to those in force in England, pursue an exceedingly liberal two-years' course in mathematics, linguistics and science, with a meagre course in pedagogy, and pass annual examinations conducted by the state inspectors.

Recent movements in England and Scotland have brought about co-operation between Training Colleges and universities in the training of teachers. The university towns now possess Training Colleges, and the universities give courses in pedagogy. Special bursaries are provided for teachers-in-training

who wish to supplement their Training College studies by courses in the universities, and special permission is granted all Queen's Scholarship candidates to substitute university lectures for certain of the regular classes of the Training Colleges.

While this provision in Training Colleges and universities may seem complete, the personnel of the teaching staff of the primary schools of Scotland is scarcely more satisfactory than that of England. The university-trained man is more common among the primary teachers of Scotland, the pupil-teacher idea has, perhaps, a less firm hold, the teacher's tenure of office is more assured, but the excessive percentage of untrained teachers is no whit diminished. Indeed in the greater freedom and authority of the local authorities in Scotland, it is, perhaps, unsafe to expect any early improvement.

Secondary Education.—The beginning of the nineteenth century found Scotland without such great Public or Endowed Schools as those of England. The spoliation of ecclesiastical revenues by the Scottish nobles of the Reformation era had left nothing for the endowment of education. The democratic sympathies of the Reformed Church had gone out to the parochial schools for the masses. Moreover, the sons of the aristocracy, whose patronage should have encouraged Public and Endowed Schools, had begun early in the eighteenth century to flock to the class-schools of England. Meanwhile the universities had been reaching down through the sphere of endowed and secondary education and receiving their students direct from the parochial schools.

But even though she was without Public or Endowed Schools, Scotland did not wholly neglect secondary education. The universities imparted the humanities to students as young as twelve years.

The liberal courses of study in the parochial schools made it possible for "lads o' pairts" to pass direct from "kailyard to college." And the great majority of the burghs had long since established municipal schools whose character was as largely secondary as primary. It is in these burgh schools that the interest in secondary education in Scotland centres. They were created, and, despite the jealous interference of the Church, in the main conducted by the burgh councils. They were not denominational schools, or endowed schools, but were public schools maintained out of fees, and the general rates. Their patrons were the children of that sturdy class of Scotchmen, the burgesses of a Scottish town. Resting thus on the secure basis of popular interest and support they knit together, in a singular oneness of purpose, all classes of citizens.

Compared with the English Public or Endowed Schools these burgh schools were more uniform in organisation and more economical, more tolerant in spirit and less exclusive; but in buildings, equipment, and, perhaps, in extent of scholarship, though not in accuracy, they were inferior. As in the English schools, the course of study included Latin, Greek, French, and some English; and, as in England, the preparatory work in the elementary subjects was committed generally to Private-Venture Schools, known in Scotland under the old names of *Sang* and *Lecture* Schools. In the severity of school government there was little to choose between the two countries. The Scottish rector was just as despotic as the English headmaster. The burgh schools opened at six or seven o'clock for six mornings in the week, and even Sunday brought its class-room tasks in Bible and Catechism. Discipline was harsh in

Scotland, and school tumults and revolts were numberless.

The changes in the burgh schools during the first sixty years of the nineteenth century were few but important. School buildings were improved. School discipline became less harsh. The school classes expanded to take in the elementary training of the *Sang* and *Lecture* schools. The curricula were enlarged by geography, history, mathematics, English literature and German. School fees were reduced, thus admitting to the classes the lower social grades of burgesses to offset the increasing exodus to English schools from the higher social grades. Above all the battle of the Church for supremacy in burgh education was fought and lost. Gradually the masters freed themselves from the obligation to act as the clergy's deputies in the instruction of their classes. The Disruption of the Church made it practically impossible to continue distinct denominational teaching after 1843. At the same time the traditional right of the presbytery to examine, license, and censure the teachers fell into disuse. Finally, the crown bent to the growing power of the laity, and in the Burgh and Parochial Schools Act of 1861 relieved the burgh schools from Church control and the teachers from all obligations as to creeds.

The same sixty years wrought great changes in the government of another, though much less common, secondary school—the academy. The scientific and commercial movements of the latter part of the eighteenth and the beginning of the nineteenth centuries created a demand for a training less exclusively classical. To meet this demand academies with scientific and commercial curricula were organised in a few burghs not already served by burgh schools, and in a few other burghs, as complements of or rivals

of the burgh schools already in existence. The academies now began to expand their courses of study, and in burghs where they stood alone they were accepted as burgh schools, while in burghs where they encroached upon the domain of the old schools, they co-operated with them or at times superseded them. At first the academies were maintained by fees and voluntary subscriptions, and were managed by the subscribers. In time endowments accumulated, and so soon as the hostility of the burgh schools passed away, the burgh councils began to offer aid towards maintenance. But municipal aid carried with it municipal interest in the schools and gradually the old boards of management were replaced by composite boards, representative of both burgh councils and proprietors, or subscribers.

The Argyll Commission of 1866 made an exhaustive inquiry into the secondary education of Scotland. It found eighty-two secondary schools in the seventy-five burghs. Of these eighty-two, thirty-two were classed as burgh schools, twenty-three as academies, nine as burgh and parochial schools combined, and eighteen as parochial schools. In addition there were four secondary schools outside the burghs, one of which, Glenalmond, was largely a counterpart of the English Public school. Of the eighty-six schools thus classified, only those of Edinburgh, Aberdeen, and Glenalmond, or six in all, were secondary schools proper. All others were secondary and primary schools combined. Private-Venture schools of the secondary class, other than the Academies, were rare, and there were not more than half-a-dozen endowed institutions of repute. Of these latter, the Dollar Institute was founded in 1818 and the Ewart Institute in 1863, while Madras Col-

lege, the Cupar Academy, and McClure's Institution were founded in the interval.

The Commission did not overlook the fact that the universities overlapped the sphere of secondary education. Although the average age of admission was rising, seven per cent. of the students in attendance at the universities were under fifteen years of age, and forty per cent. were under seventeen. As many of these students entered the universities ignorant of Latin, Greek, and mathematics, the university classes were forced to supply in matter and method the instruction of secondary schools.

The condition of the burgh schools was carefully investigated. On the whole, the teaching was good; seventy per cent. of the teachers were college-bred men. But the school-classification was not satisfactory. Each master taught his class all the subjects of the curriculum, and accompanied that class through all grades of promotion. Classics were well taught, but modern languages badly. The school courses, which generally occupied four years, were too short; school buildings were in many cases out of repair, and without regular inspection the general economics of the schools remained in a very unsatisfactory state. But the defect to which the investigation drew particular attention was the confusion of aims. There was no definite line of demarcation in subjects or purpose between the primary and secondary courses in all the schools.

The recommendations of the Commission were specific and pertinent, but futile. The burgh schools must await the reform of the parochial schools.

Ten burgh schools and about half-a-dozen "hospitals," or residence schools for orphans, made up the Endowed secondary schools referred to in the Report of the Argyll Commission on Secondary Educa-

tion. The insignificance of this number, combined with the natural thrift of the Scottish character, formed a very barren soil for the development of such abuses as were prevalent in the endowed secondary schools of England. But the possibility of abuses remained, especially with the "hospitals," and an Endowed Institutions Act of 1869 permitted the governors of existing endowments to seek from the state new schemes of organisation. The governors were naturally reluctant to take action with such a purpose, so the state again interfered. In 1872 a Royal Commission inquired into Scottish endowments and urged certain reforms in the "hospitals." They should be opened to a larger public; their curricula should be extended, bursaries should assist their graduates towards university courses, and state inspection with examinations should test their efficiency. But all reforms should be conditioned upon the recommendations of an Executive Commission. An Act of 1878 appointed this Commission and authorised it to draft schemes of organisation at the request of the Board of Governors of any endowed school or foundation. It prepared—futilely, as the result showed—thirty-one schemes for secondary and other endowed institutions.

Meanwhile, the great Education Act of 1872 had wrought important changes in Scottish secondary education. It replaced the burgh councils by the School Boards. These School Boards began at once to classify the burgh schools. Such of these as taught classics, modern languages, mathematics, and science, and at the same time abandoned the ordinary elementary subjects were to be regarded as special higher-class schools. These higher-class schools should be maintained by special burgh funds and by fees. They were to be inspected and examined annually by the

School Boards and to be taught by masters specially licensed by those Boards. While only eleven of these schools were set apart at first, the number might be added to at any time by any School Board. Enactments of six years later authorised the Boards to apply the ordinary school funds to the maintenance of these higher schools and offered the services of state officials for purposes of inspection. It is only necessary to add that despite the classification by the Boards these higher-class schools have never abandoned the elementary subjects and the ordinary primary schools have never neglected the secondary subjects.

The demand for a reorganisation of Endowed schools was now to be answered. An Executive Commission of seven members was created in 1882 to draft schemes for the management of existing endowments. These schemes might be drafted on the initiative of the Commission itself and subject to the approval of the state, they were binding upon the boards of managers. Before its dissolution in 1890, when it was superseded by the Court of Session, acting with the Education Department, the Commission drafted 379 schemes, and considered the reorganisation of 821 endowments. While it strove to preserve the spirit of the founders in these new schemes of management, its changes were significant. It favoured the creation of elective governing bodies. It threw open the most exclusive schools to a wider public. It admitted girls to the benefits of the endowments. In bursaries for poor students, in special offers of free clothing and maintenance, and in careful adjustments of tuition fees, it moved effectively towards free education. In a general way, finally, it tended to separate secondary education from primary, to give secondary and technical instruction an

organisation and method, and to place all secondary education under state inspection.

This tendency to organise secondary and technical education in Endowed schools runs parallel to a similar, but stronger, tendency in all higher-class schools. The state arranged for voluntary inspection of all secondary schools in 1886. In 1887 the first Scottish, and for that matter the first British, Technical Education Act authorised any School Board to provide technical instruction and pay for it out of the ordinary school funds. The conditions of the Act were, however, too onerous, and only one technical school was organised.

Meanwhile the delimitation of the curricula of the primary schools by successive Codes wrought havoc with the traditional studies of the parochial schools. Discontent thereat in rural districts and smaller burghs led to the investigations of a Committee of Inquiry in 1888. This Committee favoured the development of secondary instruction in the neglected districts, and recommended the organisation of evening schools, largely of a technical character. A further recommendation that secondary education be encouraged by uniform Leaving examinations for students of secondary schools was immediately adopted. The examinations were very successful and in 1892, they were opened to students from all schools. The universities accepted these examinations freely.

The Local Taxation Act of 1890 permitted the burgh and county councils to apply the residue from certain excise duties to technical instruction, but, in the doubt as to whether or not this money could be legally distributed to and through the School Boards, nothing was done. The Education and Local Taxation Act of 1892 removed this doubt

and largely increased the amount available for secondary instruction. Special funds were set apart for the inspection of higher-class schools and for the conduct of the Leaving examinations, and special grants were offered the rural and smaller urban districts in furtherance of instruction in "specific" or secondary subjects. A temporary committee, presided over by Lord Elgin, was appointed to draft schemes for the distribution of these grants. The result was the organisation of a special Committee on Secondary Education in each county and in each of the burghs of Edinburgh, Glasgow, Aberdeen, Leith, and Dundee, and in Govan parish. These committees, chosen triennially, consisted of the state inspector, of delegates from specified local endowments, and of representatives from the School Boards, and from the County Council, or the Burgh Council, as the case might be. In accordance with the "schemes" of the Committees these grants to secondary instruction were first distributed on the results-payment basis, and in 1893 on the basis of attendance and efficiency on inspection.

Since 1895 further progress has been made in the organisation of secondary education. Continuation classes and evening classes have followed the same lines of development as in England. The great majority of the higher-class schools, public or private, have accepted the state's examination and inspection. In 1898 all state aid to Scottish education, primary or secondary, was distributed from and by the one Education Department, and in 1899, as stated elsewhere, the great central authority was evolved in the form of the Board of Education.

Apart from its connection with secondary education, technical instruction proper has made little progress in Scotland. Mathematics and science form

to-day scarcely a larger part of secondary curricula than thirty years ago. Commercial subjects appear in the courses of studies of only a few higher-class schools. In the form of grants for "specific" subjects some encouragement has been given unsuccessfully to certain semi-technical subjects in the primary schools, especially in the higher grades. The Science and Art Department offered its usual grants, but as the Scottish schools were out of sympathy with the subjects it encouraged, its influence was not great. Since 1898 that influence has ceased altogether.¹

Higher Education.—University education in Scotland owed its beginnings—and well-nigh its full organisation—to the Old Church. Papal Bulls founded St. Andrews University in 1411, Glasgow University in 1450, and King's College, Aberdeen, in 1494. The development of university education after 1550, —and it was exceedingly rapid during the last half of the sixteenth century—was indirectly due to the Reformed Church. In 1577 Glasgow University was organised, or reorganised, under a new charter. In 1579 the Crown defined the respective faculties of St. Salvator, St. Leonard, and St. Mary's Colleges at St. Andrews. In 1582 it issued to the Provost and Council of the city the charter of Edinburgh University. In 1593 the Parliament ratified the charter of Earl Marischal's new college at Aberdeen.

External details in the history of Scottish universities between 1600 and 1800 are meagre and unimportant. King's and Marischal Colleges at Aberdeen stubbornly fought down all demands for union. St. Salvator's and St. Leonard's at St. Andrews were forced to accept a nominal amalgamation in 1747. Glasgow did not grow rapidly. A new charter of 1621 confirmed the Council of Edinburgh in its con-

trol of the university and the university flourished apace on the intellectual, if not on the material side.

The English and Scottish universities of 1800 were altogether unlike in organisation and spirit. The Scottish university was organised on the continental model. Unlike Oxford and Cambridge it had no college system, no residences or halls, no professors without classes, and no fellows. Unlike them again, it had meagre endowments and little corporate life. The spirit of the Scottish university was intensely democratic. It was almost entirely free from sectarian or class control, and it owed nothing to the wealthy or the aristocratic. In its intimate and persistent relations with the parochial schools, it came near to the great masses of the people and was the best representative of their life and thought. It was national in the noblest sense.

The Scottish universities came near to the masses of the people because they were numerous, well-distributed, and well-attended. With one-fifth the population of England and Wales in 1800, Scotland possessed twice as many universities. These universities, unlike those of England, were distributed throughout the country, in the great urban centres of the north, west, middle, and south-east. And while Oxford and Cambridge registered about 1,000 students in 1800, Edinburgh alone registered 993.

But it is the character of the attendance that after all explains the closeness with which the university represented Scottish life. Scottish enthusiasm for learning had no parallel in Europe. The parochial schools were unequalled instruments for directing that enthusiasm in the middle and lower classes towards the university. The university itself made easy the paths of learning to the children of the masses. It prescribed no admission examinations,

accepted youths of all ages and creeds, and carried them through courses of study in classics and philosophy that were scarcely more advanced than those of secondary schools. Even the sons of the poorest were not cast out. The university course for a degree was short and it was not the fashion to complete it. Each session covered scarcely six months of the year and left time for the industrious student to replenish his empty treasury. For tuition fees, food, and lodging, moreover, little was needed, and that little was often eked out by small bursaries.

The educational movements in Europe during the first twenty-five years of the nineteenth century had little effect upon higher education, or for that matter, any form of education in Scotland. Reforms were very few. An increasing number of the sons of the nobles and of the wealthy sought a university education in England. This defection served only to fuse more completely the classes that remained. The pressure of these classes reduced the tuition fees and this reduction in turn increased the attendance and thus indirectly increased the university's influence over the great masses of the people. University curricula tended to become modern. Mathematics and science were given more generous recognition, and the first traces appear of a desire to create efficient admission tests and efficient courses for a degree.

The universities were very poor, and disunion and disorganisation accentuated this poverty. In 1826, as a preliminary to a grant for university buildings, Peel named a Royal Commission on Scottish Universities. This commission reported in 1830.

The Report drew attention to the large attendance at the universities. Scotland enrolled 4,500 university students, as compared with England's 3,000. A large proportion of the Scottish students became teach-

ers and the Report warmly commended the influence the universities thus wielded over primary education. Both students and professors were earnest and enthusiastic. The curricula were enlarging slowly in science, and the thoroughness of the instruction, especially in philosophy, had become proverbial. Meanwhile class and sectarian influences were growing even weaker. The people controlled the universities. Professors were laymen who accepted the Westminster Confession. Theology was a department of study like the classics or mathematics. Students were of all creeds, and might even obtain exemption from college worship.

On the other hand, the Commission found defects in the existing system. The commercial spirit still kept firm hold upon the universities. All competed for students, and the spirit of competition was hostile to matriculation or other entrance tests. It frowned upon all inquiry as to the attainments of new students. Some students entered as young as twelve years, and the average age of the undergraduates at Edinburgh was fourteen and one-half years. The same spirit directed the general character of university work. The work itself, in view of the age of the undergraduates, was still largely of the secondary type. It included preparatory classes in mathematics and classics, and some advanced classes in science and philosophy. Bursaries for the later years of the college course were not numerous, and few, very few, students, were willing or able to complete the training for a degree. Only the degree of M.A. was granted, and in the absence of regular examinations and of active competition among the students, this degree was of little repute.

There were defects, too, in the organisation and administration of the universities. The governing

bodies were cumbrous and antiquated. Municipal influences were bitterly opposed to the academic influences in the government of Edinburgh. King's and Marischal Colleges at Aberdeen were separate and hostile. Certain faculties, especially law and medicine, were neglected, and there was little college spirit anywhere.

The Commission recommended that efforts be made to reorganise the governing bodies and to harmonise the conflicting interests of the universities. Edinburgh's administrative machinery might be revised, and King's and Marischal Colleges at Aberdeen should be united. Moreover, the faculties of law and medicine should be strengthened, the university standards in classics and mathematics raised, and uniform courses for the degrees of B.A. and M.A. instituted.

But in the presence of vested and time-honoured interests all recommendations were futile. For thirty years the external history of the Scottish universities was a blank, relieved only by the Inquiries of Special Commissions into the condition of Aberdeen University in 1837, Glasgow University in 1839, and St. Andrews University in 1845, and by the cancellation in 1853 of the obligation imposed upon lay professors to accept the Westminster Confession.

The blank ended with the Universities Act of 1858. This first and greatest Act in the history of the reform of higher education in Scotland united King's and Marischal Colleges at Aberdeen, curbed the municipal influence in the government of Edinburgh University, and created a uniform administrative organisation for each of the four universities of Edinburgh, Glasgow, Aberdeen, and St. Andrews. This organisation, while it rendered more efficient

and economical the administration of each university, gave an immense impetus to the development of the college spirit. The university became a democratic republic. The principal and the professors constituted the *Senatus Academicus* which took charge of the ordinary affairs of the university. The acts of the *Senatus* were subject to the approval of the greater body, the University Court, which consisted of the principal, the rector, and certain assessors nominated by the various sections of the university. Beyond these bodies was the General Council of the Graduates. The principal, who was the working head of the university, presided over the *Senatus*. The rector, who was triennially elected to office, presided over the University Court, and the chancellor was chairman of the General Council.

A special executive committee was appointed under the Act to draft schemes, subject to the approval of the government, for the application of the Act to each university. After organising the new governing bodies, the ordinances of this committee dealt with such varied university problems as new chairs, readjusted curricula, higher admission standards, shorter courses for degrees, summer sessions, etc.

But far-reaching as were the reforms of the Act of 1858, and of the ordinances under the Act, the country was not yet satisfied. The university republic was not sufficiently democratic, and there was friction between the governing bodies, and extravagance in the duplication of colleges. The courses of study were not yet adjusted to the needs of modern culture. A Universities Commission of 1876 reported in 1878 in favour of increasing the popular representation in the University Court, and of limiting the Senate's jurisdiction to questions of teaching and discipline. It would reorganise the faculties in

arts and extend the curriculum by permitting specialisation in the later years of the courses. Moreover, it would force a full amalgamation of the college foundations at St. Andrews, and create a special college at Dundee in affiliation with St. Andrews.

But again all recommendations were futile. The university question remained untouched, practically, until 1889. The Universities Act of that year created a permanent Committee of the Privy Council on Scottish Universities and a temporary Executive Commission to issue ordinances on university administration, subject to the veto of the Queen-in-Council. It strengthened the University Courts by increasing their representation from the General Councils and the Senates, and by giving them exclusive control of the revenues. In harmony with its purpose to emphasise the academic influence in the government of the universities, it recognised by certain privileges, and by an agreement to consult them, the representative Councils of Students which had sprung into existence since 1858. Colleges or interested individuals might henceforth initiate the consideration of any university problem by a petition to the Committee of the Privy Council. The earliest reforms come through the ordinances of the Executive Commission. These prescribed curricula which recognised modern movements in science, mathematics, and the humanities, and organised examination systems to control promotion and graduation. They reduced the tuition fees of all the universities to a uniform scale and classified them; they increased the university staffs; and with many other old forms and practices, they swept away the hindrances to the higher education of women. The Commission dissolved in 1897 and its duties were assumed by the

University Courts subject, of course, to the usual veto power.

On the material side the growth of the Scottish universities has been very satisfactory. Glasgow sold her old buildings and rebuilt on a new site in 1864. Edinburgh greatly enlarged her buildings in 1884, and Aberdeen received special state grants for buildings in 1895. Meanwhile the registered attendance at the Scottish universities has grown from 4,500 in 1830 to beyond 6,000 at the end of the century. In the absence of large endowments, the state grants are another evidence of rapid growth. The earliest grants were chiefly building grants and these were distributed at intervals. In 1862 the crown grants to the universities amounted to £20,000. The growing interest in secondary and higher education brought the Scottish universities an annual state grant of £40,000 in 1889. In 1892 this amount was increased by the £30,000 hitherto devoted voluntarily by Scotland to the relief of the fees for elementary education.

Dundee, the third largest of the Scottish cities, had long felt the need of a university. All plans to meet the need failed until the University Commission of 1876 recommended a "scheme" which was carried into effect in the creation of University College in 1883. At first this College was affiliated in some sort with St. Andrews University, twelve miles away, and in 1885 its students were permitted to write for the science degree of that university. The Universities Commission of 1889 extended this permission to other degrees, but its action was declared null and void in 1895. The Executive Commission then attacked, and, by ordinances which made the Dundee College a part of St. Andrews University, solved the problem. Students at University

College, Dundee, may now claim the same rights and privileges from St. Andrews, as similar students at St. Andrews.

A few special features of higher education in Scotland deserve notice here. The struggle for the admission of women to the universities was decided between 1870 and 1880. Edinburgh University was the first to grant women the privileges of attendance and graduation. Glasgow and St. Andrews instituted special degrees for women. Women mingle with men in the classes in arts and science at all universities except Glasgow. There are residence halls for women at Edinburgh, Glasgow, and St. Andrews.

Scotland is very generously equipped with theological colleges. In addition to the faculty in divinity at each university, there are special training schools for the clergy of the Free Church at Edinburgh, Glasgow, and Aberdeen, for the Congregationalists at Edinburgh, and for the Roman Catholics at Aberdeen. The special Schools of Science or Technology are very rare in Scotland. Glasgow Technical College, however, has a reputation as wide as the Empire. Scotland has not taken kindly to the University Extension movement, nor have the local examinations of her universities been so successful as those of Oxford and Cambridge.

To this day, the higher education of Scotland retains its early characteristics. It is not specifically technical or industrial; it is not highly scientific. Even in philosophy and the humanities it offers little opportunity for postgraduate study and research. It is still more secondary in character than even that of England. Moreover Scottish universities are poor in revenues and Scotland's higher education still bears about its buildings and equipment

the traces of too great economy. On the other hand, in a way unknown elsewhere in Europe, and especially unknown in England the universities of Scotland come near to the mind of the masses and share in and shape all popular movements. These universities are still attended by the middle and lower classes, and are still neglected by the fashionable and the wealthy. And so long as fees are low, terms short, and admission untrammelled, this condition promises to persist. In its persistence the middle and lower classes of Scotland are blessed with opportunities unequalled elsewhere in the Old World.

CHAPTER V.

GERMANY.

Introduction.—In reviewing the progress of education, we naturally first consider the public efforts in its behalf, that is, the public, or common, education of the people, not the private schools, nor technical schools of any kind. And in reviewing public education, we naturally turn to that nation which, first of all civilised nations, established a system of *schools for the entire people* down to the lowest strata of society, we mean Germany. It would be a most interesting historical study to trace back the educational movements to Luther, or farther back to Charlemagne, but the scope of this work forbids this. The German people's schools date back to Luther, and the German states as such took hold of public education as far back as the beginning of the seventeenth century.

The present Empire of Germany consists of twenty-six states, some large, like Prussia, which embraces three-fifths of the area, as well as of the population, of the Empire; some small, being mere cities, like Bremen and Hamburg, with their surrounding small rural territory. *But each state manages its own schools.* Public education in Germany is not an affair of the Federal government; in this respect the Empire resembles the United States, where each

state legislates for, and administers its own schools. Hence, when we speak of German schools, they are meant in the same sense in which the schools of the United States are called American schools.

This is done with a certain degree of justice, because the public schools of the various states of Germany are similar to one another and serve similar purposes, though each state preserves certain peculiar characteristics in the management of its school affairs, caused by local predilection and needs. It may, therefore, be necessary at times to speak of the schools of Prussia, or those of Saxony, or even of the schools of Austria, because up to the year 1866, Austria (Cisleithania) was part and parcel of the German Federation. Switzerland, at times, may come in for mention, when we speak of German schools, for types of schools or for imitation, because all these countries—the German States, Austria and Switzerland are German-speaking countries. It is very important to bear in mind the fact, that the organisation and management of schools are not centralised in the imperial government, but decentralised into states and local governments.

In organising graded city schools and a complete network of rural schools, in decreeing compulsory attendance at school, in establishing a diversified system of secondary and preparatory schools, in providing for ample technical and professional education, and in creating in its universities and polytechnica a secure laboratory for scientific investigation—in all these things Germany is far ahead of all other countries. It is truly regarded as the educational experimental station of the civilised world.

The history of education in Germany to the present time has to record the production of *four distinct forms of schools—the university, the gymnasium, or,*

properly speaking, the classical high school; *the real and burgher school*, or modern high school; and *the elementary or common school*. The latter is the general school, in which attendance is obligatory up to a certain year of age—generally to fourteen—for every child, unless it is attending a school providing for a higher kind of instruction. The pupils of these elementary public schools enter the ordinary—that is, the simpler—occupations, such as trades, for which more extended instruction, especially knowledge of foreign languages, is not necessary. The burgher schools and other secondary schools of low grade keep the pupil until his sixteenth year and give him an education fitted for a little higher employment in practical, especially commercial, life. The Gymnasium, Realgymnasium, universities and polytechnica represent, together with the professional study in these higher institutions, the most advanced courses of education. This higher education is clearly divided into a general or preparatory, and a special or professional course. The former closes with the nineteenth or twentieth year of life, the latter, as a rule, rarely before the twenty-fourth year. The classical high schools offer the preparation for all professions, the learned as well as the practical. They graduate their students at the age of nineteen or twenty, after a rigorous examination, which entitles the students to enter the universities and polytechnica, in which the attendance is, on an average, four years. These different types of schools have developed, one after another and one out of the other, and the course of instruction has changed in the different epochs of their existence to suit the demands of the times.

The system of education of a country stands in the most intimate relation to the whole intellectual and

economical life of the people. Political, religious, and social revolutions are never without a far-reaching influence on the methods and on the matter of instruction. The social order at a given epoch is reflected in the formation of the schools. In the same manner every enlargement of knowledge leads to an increase of the matter of instruction. Every new science of a general character seeks very soon its representation in the instruction of youth. The organisation of the schools in every epoch, therefore, may be regarded as an attempt to convey the knowledge imminent in that epoch, to the different ranks according to social position and general or professional needs of instruction. We shall not try to state these general relations, and to characterise them in their proper places, but confine ourselves to stating the conditions existing at certain periods.*

The Universities.—Upon the territory of classical education the nineteenth century accepted the inheritance of its predecessor. Through the classic period of German literature (Goethe, Schiller, Wieland, Herder, Lessing, and others) the influence of Greek philosophy upon German culture was decided. At the same time scientific knowledge of antiquity was considerably advanced by Fr. A. Wolf and his successors; philology was the dominant science in the universities of Germany at the beginning of the century. The rapid extension of this science was noticeable in the growing number of philological seminaries in the universities, for this was the form in which the new century attempted to satisfy the necessity for a better preparation of teachers for secondary schools. It did not correspond, of course, entirely to that which had been intended, for while the semi-

* The following is an excerpt from Prof. E. Nohle's *History of German Education*.

naries of the eighteenth century tried to give pedagogical education, those of the nineteenth century offered philological exercises. It was thought sufficient for educational practice if the students were qualified in their science and knew what to teach.

The reform in the organisation of the university prepared during the eighteenth century was completed during the early part of the nineteenth. An equalisation of the four faculties, Theology, Law, Medicine, and Philosophy, was perfected. The history of the German universities to the present time would be a history of the growth of modern science. It would show how, according to the enormous increase of knowledge, the various faculties have enlarged their equipment with means of instruction, but the organisation remained essentially the same: the preparatory, or college course, was definitely excluded from the university; the philosophical faculty is now a school for adults, as well as its three sisters. In some universities the increase in knowledge, or rather the multiplicity of sciences, has led to experiments with a new organisation. Thus, for instance, a division of the philosophical faculty into a linguistic-historical and a mathematical-scientific section, or the constitution of a special faculty of political economy, or science of state, has been attempted. These experiments, however, do not seem to have obtained large importance; they are still without influence upon the uniform character of the institutions. This uniform organization is kept intact resolutely, and to foreigners it appears as a decided advantage of the German university system. The university whose character has been formed in historical evolution is, on the one hand, an institution for professional preparation, on the other hand, a school for general culture. With regard to the latter, it may be said that

it continues the general training of the gymnasium or college. Furthermore, it is not only the highest kind of school and the last stage of higher education, but also the scientific workshop of the nation. Only with reference to the former condition does it belong to the state school organisation; but the scientific character of its instruction is regarded as indispensable. By means of the university, science is spread to the remotest domain of practical life; the representatives of the higher professions are not to accept dogmatically the theoretical principles of their procedures, but they must be enabled to understand them fundamentally, to prove them to themselves and to others, to examine, and, when occasion offers, also to transform and enlarge them. In this bright picture which the universities offer to German as well as to foreign observers, there are shadows, of course. Their purely scientific purpose threatens to confine and obscure their practical purpose. Of late, voices are heard from the legal and pedagogical professions which complain that the universities do not sufficiently pay attention to the demands of professional practice.

Classical High Schools.—With the new century humanism entered upon its undisputed domination in the classical schools. The new humanistic gymnasium was founded; it remained during the whole century the prevailing form of secondary education, and with its spirit German education has ever since been filled. The gymnasium is the embodiment of the idea that an intense occupation with Græco-Roman literature, and familiarity with the philosophy of classic antiquity will give the best general preparation for every higher profession. The clearness and noble simplicity of the Greek, the earnestness and dignity of Roman thought and feeling, are to be com-

prehended by the German youth in the gymnasia; they are to fill his soul, so that they will induce similar thought, feeling, and action. It was but natural that this aim, even during the best period of the existence of this school form—i.e., during the first part of the century—was not always reached by the students, but the enthusiasm of the teachers for this ideal often carried away the students. This modern humanism did not always keep itself free from that superfluity of Latin writing and rhetorical exercises which characterised the humanism of preceding centuries. It seemed to be necessary for the purpose of becoming familiar with antiquity that the beloved language of the Latin authors, especially that of Cicero, could be used orally, and often the whole system of instruction was disarranged in the endeavor to impart that facility.

Humanism in Prussia was made the governing centre of the classical schools (gymnasia), when, after the breakdown of the State in 1806 (battle of Jena), the necessity was felt of filling the life of the nation with more ideal contents for its rejuvenation. Wilhelm von Humboldt, the friend and companion of the Weimarian poets, as well as Fr. A. Wolf, was placed in 1808 at the head of the newly established section of education in the department of the interior; he took the most prominent part in this work. Under the ministry of Altenstein (1817-1840) the privy councillor, Johannes Schulze, added to the course of classical education in the gymnasia the modern branches of scientific study. He established the Prussian gymnasium, which tried to realise the ideals of humanism and to satisfy, as much as possible, the modern wants of education. Complaints of overburdening were consequently soon heard, and they have continued to the present time.

As early as 1837 they were vigorously expressed in a sensational publication by the physician Lorinser.

The new classical school education took another course in middle and south Germany. Here, through the influence of the scientific activity of Gottfried Hermann, the Leipsic philologist, and also in consequence of the organisation of the Bavarian classical schools by Friedrich Thiersch (1829), humanism was made the centre of gymnasial education, while mathematics, physics, history, geography, and other branches were considered of inferior importance. The students lived an intellectual life wholly within the world of antiquity—a life which surpassed, perhaps, in intensity and warmth, but also in narrowness, that which filled the Prussian schools. Latin compositions and orations, Latin carmina and disputations, and interpretations of the authors were made in fluent Latin, and were regarded as a most praiseworthy application of life in a foreign range of ideas. Taken as a whole, humanism agreed with that period in which the political conditions of the country induced the individual who would waste his strength in political dreams and doctrines, to seek a satisfying philosophy and a world's view far from the present time in the solitude of past historical events.

Hand in hand with the renewed humanisation of the classical schools went the more minute defining of their aims in relation to the higher and lower steps in the system of state education. As the universities excluded the preparatory course during that time, the latter was more clearly defined thereby. From among the many Latin schools (differing greatly in their courses) from which graduation to the university had been rather arbitrary, those institutions were selected which, on account of their sufficiently extended course of study, were granted in

future the exclusive right of preparing for the university. The remaining schools became simple Latin schools, progymnasia (incomplete gymnasia), or were changed to burgher schools. Examinations for graduation were provided by the state authorities in the selected institutions, which from that time alone bore the name "gymnasia." Examinations for the teaching profession in secondary schools were also ordered, and for this purpose regulations were issued concerning the amount of knowledge necessary. Finally the schools received special plans of instruction in detail. In connection with this systematisation may be mentioned the progressing secularisation of the entire secondary system of education. The teacher's office was more and more detached from the pastorate. The administration was taken out of the hands of ecclesiastical consistories and given over to secular school boards (curatoriums). Lastly, departments of education were established in nearly all states of Germany. This process of establishing a strictly gymnasial course and of making classical education independent, could be observed in all larger German states during the first decades of the century. In Prussia, the example of which was followed by the other states, the graduation examination was decreed as early as 1788—at first only for the purpose of proving qualifications for the use of stipends and scholarships, later for the purpose of proving qualification for attendance in the university. In 1834 entrance examinations in the university itself were abolished. They had been obligatory for candidates who had not entirely finished a gymnasial course. Upon the establishment of a superior school commission (in 1787), and upon that of an educational section in the department of the interior (in 1808), followed, in 1817, the establishment of a special minis-

try or department of public worship and education. Rules for the examination of teachers were issued in 1810, and again in 1831, and model-school programmes in 1816, and again in 1837.

The rigid organisation thus produced has brought with it undeniable advantages to the system of secondary schools. It guarantees the success of the work in each institution, and secures to the whole system a uniform support or income independent of advantages or disadvantages of the times. But, on the other hand, time has also thrown into bold relief the faults of the system. Liberty of interest in intellectual work has been suppressed in the student, and the necessary severe fulfillment of the duties required has led to extreme and exhausting exertion. For this reason, in the present, a desire is expressed in many places to restore to the gymnasium a greater liberty of action. Even the venerable leader of the Prussian secondary school system, Ludwig Wiese, when resigning from his office in the department of public instruction, pronounced it to be his opinion that the state, after having secured to the gymnasium its definite position, should relax in the severity of its supervision and the minuteness of its regulations, in order not to prejudice the intellectual life of the students. "The strength and fertility of the policy of the Prussian State," he said, "has been proved in the schools during a long period, but there is danger lest, upon the field of intellect, this power become a tyranny." Outside of Prussia the schools kept free from this evil for some time, but the greater uniformity of the political institutions has aided the same policy since 1870 in the other States also.

The classic time of modern humanism is, as has been stated, the first part of the century. After 1840 other interests began to gain advantage over it. New

sciences, such as general and comparative philology, German and Romance philology, etc., grew up; others, such as history, commenced to develop, and the natural sciences occupied the attention of the learned, by their theories as well as by technological inventions which resulted from them. Besides, church and political revolutions excited ever larger circles. People began to criticise the humanism of the classical schools. It was said, that it had already deviated considerably from its original idea; Greek had receded behind Latin, and the interminable Latin writing and grammar lessons prevented the reading of ancient authors. The demands of modern educational elements also became very prominent. The men of 1848 expressed, as they did in other matters, the demands of the time with reference to secondary schools, and it was done with no uncertain sound. "It is," said Köchly, one of the leaders of the revolution, "an old and grievous error to confound the old classical education with speaking and writing Latin." However, with other wishes of the time, the reform of gymnasia was brushed aside. In Prussia during the ministry of von Raumer (1851-1858) gymnasia instruction was modified somewhat, but not in the sense alluded to. Ludwig Wiese, who from 1852 stood at the head of the section of secondary schools in the department of public instruction, agreed with the minister, that a greater concentration in the course of study of the gymnasia was necessary. He said of the minister: "He inclined toward the old simplicity in the course of study, and would have liked to confine it to instruction in religion, ancient languages, and mathematics." But Wiese was impartial enough to acknowledge the impossibility of this simplicity in the face of the demands of modern education, which he thought justified to a large ex-

tent. These modern tendencies found expression in the revised course of study of 1856, although the changes made in it were not great. The means of concentration were found, by a large number of the philologists of that time, in a stronger emphasis of the study of the Latin language; formal grammar was made intentionally the main branch of study.

In Austria, on the contrary, a gymnasial reform took place which met modern demands to a very large extent. It was undertaken by Ministerial Councillor Exner and the philologist Herman Bonitz, who had been called from Prussia. Also in Bavaria, a new school order was issued in 1854 which, however, turned into the old ways, and did not much deviate from the former limitation to humanistic subjects. Würtemberg followed the other States in so far as it separated philological from the theological studies and made them self-dependent. The management of classical schools in this Kingdom shaped itself gradually in accordance with a programme published in 1852. In Baden the authorities imitated north German institutions; Saxony, also, since the middle of the century turned away from the south German toward the north German gymnasial pedagogics.

The great elevation which national life experienced in Germany after the war of 1870 and 1871 was, of course, not without influence upon the secondary schools. Questions relating to it were ventilated with great candour. It was asked, whether the schools which prepared students for the university were really giving a national education to German youth destined for higher professions. The Germans found themselves suddenly face to face with a number of practical problems, educational as well as political and economic, which could be solved only by a thorough comprehension of the time. One thing was

plain, the people felt obliged to meet the growing need of providing youth with modern means of education in a more extensive manner than formerly. It was observed, that physical power and energy of will did not suffice for the increased demands of practical life. The discussion of educational conditions existing in the Empire soon spread from the limited sphere of teachers' clubs to a wider sphere embracing all men of education. Questions of school management and organisation, education, and training have become, especially since the close of the seventh decade, ever fresh subjects of public discussion in daily papers and reviews, and they continue to agitate the nation as never before. A number of popular societies have been established which in various ways attempt a solution of the school question; among their members laymen are often in the majority. The unification of the German States into an Empire has resulted in attempts at greater uniformity of the various school systems. For the purpose of arranging this uniformity an imperial school commission was appointed in 1875. This commission succeeded in prevailing upon the four kingdoms—Prussia, Bavaria, Würtemberg, and Saxony—to reform their classical schools in 1891-1893 by adopting new programmes and time-tables in their gymnasias, which on the one hand meet the demands of modern life by limiting the time devoted to humanistic studies, and on the other hand establish a most desirable uniformity concerning preparatory studies for the university.

Prussia, first of all, began with new courses of study in 1882, of which the preliminary work is traced back to the ministry of Falk. These new courses signify a return from the preponderating grammatical practice of Latin to the older human-

ism which laid stress upon the contents of the classics. These courses prescribed a reduction in the linguistic instruction: Latin lost nine hours a week, Greek two, and at the same time the beginning of the latter study was postponed two years. Reading the classics was placed in the foreground, but a certain ability in the written use of Latin was demanded, and Latin composition retained its former importance. But a new phase for the development of the classical schools came with the beginning of the reign of Wilhelm II. (1888). Filled with the idea that the schools should meet the danger which threatened the State through social democracy, he ordered an investigation by the Prussian educational authorities into the means by which this could be done. A consequence of this was the convocation of a conference of schoolmen and educated laymen, which took place in December, 1890, in Berlin. It was natural that their deliberations should embrace all the questions which at present interest secondary education. The assembly, owing to the character of the men selected for it, inclined toward leaving the humanistic studies of the gymnasium intact, and preserving the position of these schools as the most important and exclusive preparatory schools of the university. An indirect influence of the resolutions passed by the conference became obvious, however, in the new programmes published in 1892. In the latter the object of doing away with overburdening the students by mental work, is clearly demonstrated, and more physical exercises are prescribed. For this purpose not only the time for gymnastic exercises is increased, but also the whole number of intellectual lessons per week is diminished. This is done at the expense of the humanistic studies; Latin lost fifteen and Greek four hours a week. Latin compositions, which had

been discredited before, were now abandoned, and Cicero was rejected as a model for style. The object of teaching Latin is now restricted to "linguistic-logical training and familiarity with Roman literature"; that of Greek, the knowledge of literature alone; as purpose of the entire humanistic education is assigned, "historical comprehension of antiquity." The good intention to give more time and space to modern educational elements, also prompted these changes. English, as an optional study, was introduced everywhere, and drawing was re-enforced. The gymnasium, it was thought, was now able to give preparatory education to all higher professions, the technological included, and do it either alone or together with other kinds of secondary institutions. To another point of view attention was called in the new programmes, namely, the training of character. Religion, German, and history are especially to serve this purpose. Lately (since 1895) it is officially permitted to increase the number of Latin lessons in the upper grades one lesson a week.

Also, in most other German States changes were made in the time-tables of gymnasia during the seventies and eighties; for example, in the Grand Duchy of Hessa in 1877 and 1884, in Saxony in 1882, in Baden in 1883. Bavaria in 1874 extended the course of its gymnasia from eight to nine years, for the purpose of establishing more complete uniformity with the north German schools, the realistic branches being still a little neglected. The new programmes, given since 1891 in Bavaria, Württemberg, and Saxony disclose the same tendencies that prompted the Prussian authorities in 1892. Everywhere the education of the mind and the training of the character are strongly emphasised, and modern culture, especially natural science, is treated with more consid-

eration than before. The number of lessons in classical languages, as in Prussia, is decreased everywhere; for the method of instruction it has become an axiom, that reading the classics should be the main point, while Ciceronian writing-exercises are abolished. Thus, for instance, it is said in the Württemberg programme: "Training the students as though they were all to become philological teachers should be avoided. In gymnasia the object should be to impart the elements of classical culture, and to open up ancient intellectual life." Latin composition was abandoned also in Saxony. Likewise the partition of the matter of instruction upon the various grades has become more uniform. French generally (except in Bavaria) begins in the second grade (from below), Greek in the fourth.

Thus humanism in the classical schools experienced a setback at the close of the century, at the beginning of which it had undisputed dominion. It might be said, of course, that it only now begins in earnest to free itself of the barnacles that have impeded its progress—that is, the dry, tedious Latin exercises of the earlier times. It is certainly a laudable tendency of the various courses lately adopted to bring the real content of humanism, which is to be acquired only by reading the authors, to its fullest effect upon the mind and character of the students. However, it is not generally believed that the new courses of studies (or programmes) have finally and in the best way solved the gymnasial questions of the present. It may not be right that the old philological teachers pretend not to be able to accomplish what is prescribed, owing to the diminished number of hours allotted to them. More important is the other consideration, whether the classical school can carry the additional load of ancient and modern culture.

But most important, perhaps, is the fact that humanism has lost in the life of adults the place it used to take. It will be a question for the nation in future to decide, if, and to what extent, it can further preserve that medium of education in the centre of classical education without prejudice to other interests.

Realschulen (modern high schools)—*Technological Universities*.—Side by side with classical schools the system of modern high schools obtained, during the nineteenth century, such an extension in breadth and height that it could assume equal importance with the classical and the elementary instruction. This development is based upon the rise of the natural sciences during the same period; upon the applications which their results found in technology immediately; and upon the elevation of the middle citizen class, and other circumstances. By way of exact research the natural sciences soon experienced a rapid development in the first decades of the century. They kept on progressing, and soon occupied a considerable part in the enormous enlargement of the philosophical faculty of the university. As a natural consequence, they soon commenced to claim their place in the education of the nation and in the instruction of youth, side by side with the philosophical sciences. At the same time, in the economical life of the people, especially since the third decade, the most notable changes have taken place, in consequence of new discoveries and inventions. As early as 1818, steam vessels plied on German rivers; twenty years later the trans-Atlantic steamer routes were opened, which became of vast importance to Germany. In 1833 the first telegraphic wire was strung, and in the same decade the first railroads were built in Germany. Through all these things commerce and industry re-

ceived a powerful impetus. The development of the tariff system in Germany acted in the same direction.

In Prussia, at the beginning of the century, even the separate provinces were locked against each other. The tariff orders of the second decade of the century created a freer motion, and later (in 1834) this freedom was extended by the establishment of a tariff union (Zollverein) beyond the frontiers of Prussia to a large number of German States. The ultimate consequence of all these economic changes was the elevation of the citizen class, especially of the wage-earning classes in industrial and mercantile pursuits. How much, indeed, needed to be done for them can be seen from the biography of the Prussian state councillor, Fr. von Knuth, by P. Goldsmidt (Berlin, 1888). Knuth, who had been tutor of the two Humboldts, and who afterwards entered the Prussian Administration, attempted earnestly, shortly after the war of liberation, to inaugurate a better education of the wage-earning classes. The actual state of their knowledge was very low. Many of them could not write; foreign inventions and scientific discoveries were not utilised; enterprising spirit they had none; they had to be pushed and persuaded by governmental officials to everything that was in their own interest. To see the difference between then and now one need only compare the present extent and importance of every kind of industry in Germany.

Finally, a profession of its own, of technical men, grew up in consequence of these economic, industrial, and scientific revolutions, represented by men upon whose professional and general education life made ever-growing demands. This development is reflected in the growth and development of technological universities, which had their beginnings in secondary technical schools, and are now institutions which are

justly ranked with the old universities; at any rate, they lay claim to equality with them. In 1794, first of all in Paris, an "École Polytechnique" was established; following this model, in 1806 in Prague, and in 1815 in Vienna, polytechnical institutions were established.

In Prussia as early as 1799 the Royal Architectural Academy was founded. In 1821, on the advice of Beuth, the "Technical Institute" was added to it. This was an industrial school of two grades, after the model of which schools of only one grade were established in the provinces. Similar schools came into existence in the first part of the century in different places of Germany.

They ordinarily required as a preliminary education not more than the common or elementary branches, but they represented, on the other hand, the highest stage of technical instruction. Since about the middle of this century some of them have widened their scope and become polytechnical institutions, and assumed the character of universities. Thus the school in Hanover in 1845, that in Dresden in 1851, that in Karlsruhe in 1863, etc. For this kind of school, especially, the Polytechnicum of Zurich (established in 1854) became the model, partly through the prominence of its distinguished teachers and partly through its organisation; because here a philosophical department with political economy was opened, which seemed to offer full compensation for the work of the philosophical faculty at a university. In 1868, in Munich, a similar institution for technological instruction was opened. In Prussia the "Industrial Institute," which had resulted from the old "Technical Institute," became in 1866 an "industrial academy," and was, in 1879, combined with the old-established "Architectural Academy" and

called "Technical University." The polytechnica of Hanover and Aix-la-Chapelle were changed to conform with that of Berlin.

The new universities thus developed have the purpose "of affording higher instruction for the technical professions in state and community service, as well as in industrial life, and of cultivating sciences and arts which are intimately connected with the field of technology." They prove themselves equal to universities in the following points: They claim for their matriculated students the same preparatory education required by the old universities, namely, one of nine years at a classical high school; they grant and insist upon perfect freedom in teaching and learning, and are under the direction of rectors elected for one year, instead of having principals chosen for life, as in secondary schools.

Combination of Classical and Modern High Schools.—The modern high schools, or Realschulen, in their various forms, since the first decades of the century tried to answer the demand for preparatory education made by these newly established polytechnica, as well as those which high-standing industrial private enterprises made upon their leaders and technical men. Furthermore, they tried to meet the demands of the middle class of citizens for a suitable general education upon a modern basis—that is, a general education without a study of the classics. During the second and third decades such schools, mostly called Realschulen or burgher schools, were established in nearly all German States. The endeavours of Spilleke, Scheibert, Mager, and others for the theoretical and practical organisation of such schools fall in this period. They still combined the higher and lower stages of realistic instruction. But soon a more advanced preliminary education was claimed,

especially for the technological professions, which could not be given by these simple Realschulen or burgher schools. Neither could that preparation be had in the classical schools as they were then organised. Higher mathematics and natural sciences were necessary for this kind of education; also modern languages, as an important auxiliary means of modern commerce.

For this reason another kind of preparatory school came into existence, a combination of classical and modern high school, the so-called Realgymnasium, which, owing to the higher studies for which it prepared, introduced the study of Latin in its programme. Thus a combination high school was opened in Berlin in 1828, in Gotha in 1836. In the Duchy of Nassau the diet, in 1839, urged the establishment of such an institution in Wiesbaden, and the government evinced much interest in the plan; in 1845 the school was opened. Concerning the object of such schools, the law ordering the establishment says as follows: "The Realgymnasium of Wiesbaden has the purpose of a general scientific preparatory education for those who intend to devote themselves to a technical-practical profession, and who, immediately after graduation, enter upon it, or who intend to continue their studies in a professional school or polytechnical university." The institution, from its beginning, had Latin in its course of study; in this it went as far as reading Horace, following the programme afterwards adopted elsewhere, and required a Latin composition at the maturity examination. It only consisted of three upper grades of its own, the lower ones agreeing with those of the classical school.

As a matter of course, in their further progress of development these schools turned their eyes also toward the universities, for it was obvious, that they

were able to give at least as good a preparation for mathematical, scientific, and modern-language studies as the humanistic gymnasia. The year 1848 emphasised the consequences of the case in question. At the Prussian state school conference of 1849 the government proposed to raise above a common foundation both a Gymnasium and a Realgymnasium, to which proposition the conference added the other demand—that graduation from the latter should entitle to admission to the philosophical faculty of the university. The epoch following was not favourable to this modern high school of advanced grade. However, the same length of course which the classical high school maintains, i.e., nine years, indicates that to a certain degree an equalisation could not be denied them. This was acknowledged in Prussia by an order concerning instruction and examination in Realschulen and burgher schools in 1859, which took the place of the “preliminary instructions” of 1832 for modern high schools without any distinction.

According to this new order, modern high schools of first and second rank were distinguished. For the first, a course of nine years, like that of a gymnasium, was laid down, and Latin was made a compulsory study. In 1870 these schools were granted the right to prepare for mathematical, scientific, and modern linguistic studies in the university, which implied admission of their graduates to the university without entrance examination. Already in 1864 Bavaria had secondary schools of this kind, with the same qualification, and bearing the name “Realgymnasia.” They had the same length of course as the Bavarian gymnasia, and were enlarged in 1874 to institutions of nine grades. The three lower grades agree with those of the gymnasia. In Württemberg, in 1867, a “realgymnasium” was branched off from

the Stuttgart gymnasium; later a similar school was opened in Ulm. These combination high schools of Württemberg claim to have more of a humanistic character than those of northern Germany, on account of their extended Latin practice. Their graduates are admitted to the polytechnicum and to the agricultural academy, also to studies in the philosophical, the scientific, and the law faculty of the university. Prussia followed these States in 1882 by also giving the name of "Realgymnasia" to the "Realschulen" of the first rank; the enlargement of their gymnasial character was to be seen in a greater number of lessons devoted to Latin. In Saxony such combination high schools of a nine-years' course have existed since 1884.

Gradually the "Realschule" (the realistic high school in contradistinction to classical school) has changed also. As the technical professions rose to an equality with the old so-called learned professions, modern secondary education assumed more importance, especially since the re-establishment of the Empire after 1870, so that the former merely technical preparatory institutions gradually changed to secondary schools for general culture. It has even been asserted that since these schools had to a great extent been divested of this purely technical or industrial character, they should now give that modern education which the times demanded for the sons of leading men in all occupations. The most radical advocates saw, and still see, in the realistic school (without classical languages) the gymnasium of the future; those who like to preserve existing institutions endeavour to secure full equalisation of both modern and classical high schools. This is especially obvious in reference to the qualifications for admission to the university, and the next step to this aim is the

admission to the study of medicine. But others deny the justice of such a step, and wish to see the realistic high schools pushed back into their old place of technical preparatory institutions. At the present time these questions are vigorously discussed in the educational press. The Prussian government in its last reform measure, in 1892, has taken a position with regard to these questions which was not expected after the issue of the courses of study in 1882. The December conference of 1890 concluded that the combination high schools (Realgymnasien) should be suppressed, and that in future, besides the classical high schools (Gymnasien), only institutions without Latin, the so-called upper Realschulen, should exist. But the new courses of study prepared by an executive committee of that conference do not follow that plan, except in reducing the time allotted to Latin in the combination schools. In these new courses the upper Realschulen are made nearly equal with them in their privileges of preparing for higher studies, and the question as to whether the combination school is still entitled to exist side by side with the classical and the realistic schools, is left open. The steps taken lead to no solution.

Recently general attention has been bestowed upon the experiments made in postponing the beginning of Latin at the gymnasien, as well as the combination schools to a higher grade, and thus to establish a common foundation for all schools of nine grades (Altona and Frankfort courses of study).

The just-mentioned upper realistic high schools (without Latin) came into existence in Prussia during the seventh decade. They grew out of the former industrial schools (Gewerbeschulen), and were soon classed among the secondary institutions of nine grades—that is, schools which attempt to give general

modern education based upon modern languages, mathematics, and natural sciences, without Latin. After having lost, in 1886, the privilege of sending their graduates to the Academy of Architecture, they regained this privilege in 1892, as has been mentioned. Furthermore, they gained for their graduates admission to the philosophical faculty at the university, at least for the study of mathematics and natural sciences. In Würtemberg the corresponding school form, a modern high school without Latin, obtained, in 1876, the qualification of sending its graduates to the polytechnicum and to the natural science faculty of the university. Schools of this kind exist also in the States of Oldenburg and Brunswick.

Lower Realschulen and Burgher Schools.—While thus, during the nineteenth century, frequent remodelling of the former realistic or industrial high school has resulted in a system of schools for general culture which are at the same time preparatory institutions for higher education, the original form of it, the so-called "burgher school" was neglected and lagged behind in development. It tried to give a suitable secondary education for practical pursuits. The problem which the eighteenth century proposed, i.e., to meet the needs of the rising "burgher class," has not yet been solved satisfactorily in the present century. Only in a few German States and cities the burgher schools could freely develop in the economical interests of the wage-earning classes. Thus, for instance, in the three republican States of Germany, the free cities, Hamburg, Bremen, and Lübeck. In other States, the original object of such schools was turned aside by alien considerations, and often "the Latin of the classical schools was superimposed upon them." This was done in Prus-

sia by means of the "preliminary instructions of 1832." The "examination order of 1859" classified these middle schools as burgher schools or Realschulen of the second rank.

The study of Latin seems to have been thought indispensable for the privilege of "one year's service in the army." Only when after the sudden territorial expansion of the State in 1866 the Prussian school authorities came in contact with other than Prussian institutions which had shaken off Latin, the need of "burgher schools without Latin" was felt more acutely. In 1873, first of all, in Breslau such a school (conducted by Rector Dr. Bach) was granted the privilege of giving the certificate of one year's service in the army. (Boys who have only an elementary education must serve three years in the army.) In the courses of study issued by the minister of education in 1882 these secondary schools of an inferior grade were officially prevented from amalgamation with Realschulen of the first rank. The introduction to the official programmes contains these words: "An obvious need has shown that secondary schools must be established for an advanced education which in six years, by excluding Latin, may lead to a certain degree of completion; schools which do not aim at preparing for higher education, but which will enable qualified pupils to acquire the military certificate of one year's service." Nevertheless, the number of these schools increased but little in the following years. Their development was hindered by the fact that the other high schools usurped their functions to a large extent; that is, they kept a great number of students only until they obtained the certificate referred to, a circumstance which is considered favourable neither for the education of students preparing for higher studies nor

for the burgher school pupils. The December conference of 1890 (see above) recognised this evil and proposed a number of remedies which the executive committee, kept in session to complete the work of the conference, adopted in 1892. Among other remedies a closing examination was required of the students who left the gymnasium in the sixth year of the course. This was done to make them equal in this respect to the students of the burgher schools and to take away from them an apparently undeserved privilege. The difference between institutions of seven and those of six-year courses was abolished and the name "Realschule" was given to schools of six grades only. Also in other German States attempts were made during the seventh and eighth decades to foster schools without Latin for the middle class of society. In Bavaria such schools were established in 1877, in Saxony and Hessia in 1884, in Baden in 1885; in Württemberg they had existed already for some time. Latin is excluded from them as a regular branch of study, but some have Latin as an optional study, because they have to perform the task of a pro-gymnasium or incomplete gymnasium in small towns.

Generally, it may be said, the opinion is prevalent that the extension of this kind of schools has proved a social benefit for the nation, especially for industrial communities. A special advocate of these high schools of six years without Latin, School Councillor Dr. Bertram, in Berlin, has expressed this opinion in these words: "More and more has this idea ripened among industrial people that their welfare and happiness is based upon two facts. The one is that they can readily earn a livelihood and find suitable spheres of activity; the other and more potent fact is that by means of these high schools, specially de-

signed for their needs, they participate in the general education of the nation. They feel that they receive a satisfactory preparatory education, and hence assume an adequate position in the economy of the nation." (Proceedings of the Dec. Conf., p. 354.)

Public Elementary Schools up to 1860.—The public elementary schools, or Volksschulen, only called so generally during the nineteenth century, increased at first only in number and improved in external conditions. The governmental authorities endeavoured to approach the aim set for the State by drawing into the influence of compulsory elementary instruction all children who could not aspire to secondary and higher education, owing to the want of means. This aim has nearly been reached at the close of this century. In Prussia, for instance, the percentage of children illegally withheld from school was found to be 0.02 per cent. for 1891; the percentage of those who were released temporarily or for good before the age of fourteen, having completed the course or otherwise been taught, was 1.55 per cent. The other 98.43 per cent. were educated in public or private schools or in asylums, owing to physical or mental defects. The result is that the conscription of military and naval recruits shows the small percentage of illiteracy of 0.16 per cent. in 1897, and even that small fraction of one per cent. does not represent absolute, but only relative illiteracy. But these numbers can not disguise the fact that there still remains much to be done by the State toward a complete performance of its civilising task. In many places the number of pupils to each teacher still surpasses the number prescribed by law. The distance many children have to walk to reach school is often too far, and a large number of children

are not seated according to educational and hygienic principles. The funds and the annual appropriations by communities and the State are considerably larger than in former years, although in this respect, considering the magnitude of the task, not all justifiable claims are met. The teachers' salaries have been increased of late, the pension and annuity funds augmented, and for the construction of schoolhouses and their equipment large sums have been appropriated and expended.

Greater, even, than the exterior changes which the public elementary schools have experienced have been the interior changes since the close of the last century. These changes, which may be termed reforms, are intimately connected with the name of one man, that of the Swiss citizen Heinrich Pestalozzi (1746-1827). The effects which his influence has had upon the organisation and management of public instruction are threefold: (1) He awakened a deep-rooted interest on the part of the State in elementary education; (2) he has deepened elementary instruction and worked great improvements in its methods; (3) the world owes to him the formation of an elementary teacher's profession, the members of which do their work with devotion, being active not only in the welfare of their own profession, but also in the progress of their professional science. Pestalozzi, who was still under the potent influence of the era of enlightenment, directed all his thoughts and emotions toward educating and elevating the people mentally and ethically to a higher level of civilisation and culture. "I saw your tears," he wrote to a friend who was the witness of his first trials in teaching, "and in my bosom there surged up a rage against the man who said that the ennobling of the people is only a dream. No; it is

not a dream. I will give the art of ennobling into the hands of the mothers, into the hands of the children, into the hands of innocence, and the evil ones will cease saying it is a dream." But the public education he meant was not intended to be the customary education which consisted in reading, writing, arithmetic, and perhaps a little knowledge of nature, and which had been offered because it was necessary in common life, but it was to have the high aim to develop the mental and moral faculties of the pupils and to awaken even in the poorest child a noble sense of humanity. A minute methodical treatment of elementary branches through Pestalozzi and his successors resulted from this principle. And lastly, it may be said, the activity of a profession of elementary school-teachers is recognisable everywhere in the entire history of the public school of the nineteenth century.

That State which at the beginning of the century made the nearest approach to the pedagogy of Pestalozzi was Prussia, which, after the disaster of 1806 (Napoleon's victory at Jena), saw in Pestalozzi's ideal one of the means to re-establish the State. Men like Fichte and Stein called attention to the new method of education, and expected from it a renovation of the entire public life. Young teachers were sent to Pestalozzi to learn his manner of teaching by personal observation, and they became eager to transplant it into Prussia. Soon astonishing activity was displayed on the part of the government, as well as by professional men of all kinds, in behalf of the schools. With the reaction, however, which set in in all political affairs after the war of liberation, the government withdrew from this activity before the spontaneous impetus of public spirit; but it continued to care for the increase and better ma-

terial foundations of the school system. While thus the Government withdrew from influencing the inner working of the schools after having engrafted upon it the spirit and methods of "Father Pestalozzi," the teachers personally devoted themselves zealously to the further development and improvement of his methods in theory and practice. A vivid description of this epoch, in which the schools were free on the one hand from politics, and on the other hand from minute official regulations, is given by Kellner in the first part of his "Lebensblätter" (Freiburg, 1892). The most prominent representative of the elementary school system during this epoch was Adolf Diesterweg, from 1832 to 1847 director (principal) of the newly established normal school for city teachers in Berlin. But after 1840 the State authorities began to take energetic measures for the purpose of counteracting enlightening tendencies in normal and elementary schools. A suitable pretext to this was given by an undue exaggeration of the objects of public instruction in normal and lower schools which had taken place in some institutions. These attempts on the part of the government were soon considerably increased when it was found that some teachers had taken part in the oppositional movements of the year 1848. The reaction following that eventful year turned also against the public school. Instruction in normal and lower schools was to be reduced "to that simplicity which is required by actual conditions." This intention was plainly expressed in the well-known regulations of Stiehl of 1854. In these governmental regulations the education offered in the ungraded school of rural districts was made the standard for the whole system of elementary schools. Religious instruction was made the centre of the daily programme and the core of the

entire course, so-called realistic or secular knowledge was greatly restricted to the bare elements, and even for religious instruction the memoriter practice was prescribed as the mode of procedure to be followed.

Similar counter-movements and reactions took place at various times in other German States. In Bavaria a reorganisation of the public schools began with the year 1802. The compulsory feature of elementary education was made more severe, school discipline was regulated by law, and a course of study was elaborated which showed the deep influence of Pestalozzi's pedagogy, but which for this very reason was not free from extravagant demands. A restricting revision of the course was deemed necessary as early as 1811. Toward the end of the third decade a complete reaction set in under the ministry of Abel. A strictly religious character was made the end and aim of the public school, and this tendency prevailed till the end of the fifth decade. In Württemberg, which had been a purely Protestant State up to the beginning of the nineteenth century, the necessity to reorganise the public-school system came with the immigration of new citizens belonging to other confessions. A decree for Catholic schools was issued in 1808, a new decree for Protestant schools in 1810, and in the following year the first public normal school for the preparation of elementary teachers was opened. Both school laws rested upon Pestalozzi's principles and practice. Of course this potent influence was banished from the schools by the government after a few years, probably because it acted in the beginning more destructively than constructively. However, to some extent Pestalozzi's influence remained active among the teachers for many years. In 1836 a school law for elementary

schools was issued, which has remained to this day the basis of the Würtemberg public-school system. The laws of other States are dated as follows: Nassau, 1817; Weimar, 1821, 1822; Baden, 1834; Saxony, 1835.

Later Developments of the Public Schools.—Since the sixth decade a counter-movement of great strength has followed upon the preceding reaction, at first during the ministry of von Bethmann-Hollweg (1858-1862). In the course of study of the elementary schools the realistic branches were strengthened by allowing them more time; the memoriter work in religion was diminished; the professional preparation of the teachers assumed a more liberal character—for instance, by admitting German literature in the normal schools, a branch which had been excluded by the regulations of the former period. With this step there began a gradual revision of the former rules by practice—that is to say, the teachers themselves went beyond the restrictive regulations. This had been going on for some years when a reorganisation was undertaken with great vigour by the minister of education, Mr. Falk (1872-1879). In 1872 a law defining school supervision was prepared and passed by the diet (legislature). Upon the authority granted him by the law, he issued his “general regulations,” which gave to the elementary schools, both lower and advanced, a modernised course of study; the professional education of teachers in preparatory and normal schools was greatly improved by the new decree, also the examination system belonging to it. The motive which dictated the law of school supervision was, as is well understood, to strengthen the hands of the government in its struggle with the Catholic hierarchy, which was then prominent before the public. The law affirmed again the sove-

reign right of the State over the whole school system, including the elementary or people's schools. The general civil law of 1794 had already declared the principle of the State's sovereignty over the schools, but the supervision of elementary schools until 1872 had been left to the Church. Now, it was by law claimed by the functionaries of the State, and only in exceptional cases were ecclesiastical inspectors retained, but with the understanding that they were acting under orders of the State. In practice clergymen have been acting as school inspectors even since the passage of the new law, but since then the State has gradually increased the number of local secular school inspectors, especially in the eastern and western frontier provinces; these men act as professional supervisors and superintendents, and report to superior State authorities. The renewed claims upon supervision by the State became especially important in regard to religious instruction, for the Falk law denied the interpretation of the former custom, according to which the teacher of religion received his authority from the church and was ultimately responsible to it. With reference to the denominational character of the schools which had hitherto been retained, a change was made, to wit, the so-called simultaneous schools were admitted wherever it was commendable to have combined instead of separate schools. The purpose was to facilitate the organisation and management of schools. The new course of study greatly restricted memoriter work in religious instruction, and suggested in its place emotional assimilation of religious matter. Nature study was greatly emphasised in the new course and provided with a larger number of hours per week. Furthermore, in this period (the Falk Era) the material basis of the schools was improved by larger annual

appropriations, by raising the teachers' salaries, increasing the number of schools and class rooms, by granting more liberal equipment with means of instruction, and other measures.

The ministry of Gossler (1881-1891) generally adhered to the principles of the administration of Falk, but in the proposed school law which Minister von Zedlitz prepared and presented to the house of deputies a decisive retrograde step was noticeable. The religious denominational character of the lower schools was again recognised in this bill; instruction in religion was placed in the centre of the teacher's work. The motive of this bill was the endeavour to equip the schools with means for the struggle of the State with social democracy. The excitement which Zedlitz's project produced in Prussia as well as in other German States is not yet forgotten. In parliamentary, as well as in other public discussions, decided disinclination of educated people against the principles underlying the bill was manifested. It was urged that the public school had purposes outside of religious and moral education, namely, the imparting of a considerable amount of realistic knowledge for theoretical and practical purposes, and furthermore, that as contrasted with unnecessary separation along the line of religious confession *the homogeneity of all citizens in a national and civil respect should be emphasised*. The purely ecclesiastical and the conservative parties in the house of deputies saw in the bill the best expression of their wishes and opinions. The government withdrew the bill, although it is alleged that its passage seemed secured by a sufficient number of votes. Up to the present time no law for elementary schools has been passed in Prussia, and under prevailing circumstances no law will be passed in the near future, much

less a general school law, though the government has tried to frame such a law, ever since the beginning of the century and the constitution adopted in 1850 specifically prescribed it. It seems the prevailing view that neither the one nor the other law will be passed if submitted to the legislature. Hence it has been thought best, for the purpose of avoiding violent clashing of opposing views, to restrict the action of the government to providing better financial support of the schools and thus improving them.

Similar troubles agitated other German States at an earlier date. In Baden, for instance, in 1860, a law was passed concerning the relation of the church to the state, which law affirmed the general principle with regard to the schools, namely that the management of the schools was a function of the state. Religious education might be conducted and inspected by the church authorities, but "without prejudice of the uniform state authority over institutions for instruction and education." A secular central authority was established in 1861 in the supreme school council. The real struggle began when in 1864, by a special decree, state inspectors were appointed for public elementary schools. The presidents of local school boards, who were the superintendents or inspectors by ancient custom, were to be appointed by the government; clergymen ordinarily, as heretofore, might be chosen for that office, but the law acknowledged no obligation for such a choice. District (county) school commissioners, as State officials, Catholic and Protestant, were also appointed. The Catholic hierarchy opposed these appointments vigorously by refusing all assistance in school matters, and by breaking off all communication with the government. The Protestant clergy likewise showed discontent with the provisions of the new law. The

struggle was interrupted by the events of the war of 1866, and afterwards was concluded by a compromise in form of a new law (1868) which in some points yielded to the demands of the clergy. In Bavaria, from the beginning of the sixth decade, the desire for a school law was strongly felt, and attempts were made to meet the wishes of the people. As a first step to this end may be considered the passage of a teachers' salary law, dated 1861. A bill for a school law dated 1867 produced much agitation all over the State. The cause was here, as elsewhere, the proposed separation of the school from the church. A compromise between the two chambers of the diet was not accomplished. In place of a law, the minister of education, Von Lutz, during the seventh decade, introduced by decree some of the modern features of organisation and management into the public-school system. Thus, for instance, secular was acknowledged side by side with ecclesiastical inspection, and the mixed school (containing both Catholic and Protestant children) was declared permissible. Other States also regulated their school system during the second part of the century upon a modern basis. Thus Würtemberg did so by the many additions to the law of 1836 (mentioned before), which additions were all decreed since 1858. A model course of study for ungraded schools was issued in 1870. In Saxony, in 1873, the public-school law of 1835 was replaced by a new one; the normal-school system was regulated and given an official course of study. In the duchy of Gotha a school law was passed in 1863 and revised in 1872.

Also in Austria considerable changes occurred during this century in the field of public education. After the passage of the "political constitution of the German public schools" of 1805, which was an

expression of retrogressive conservatism, the schools remained for over forty years upon a low plane of development, partly in consequence of this law, partly because of the general stagnation under the domination of Metternich. Only since the revolution of 1848, which put an end to the régime of Metternich, the State again turned its attention to public education. A new and powerful impetus was given the improvement of the schools by the disasters of the year 1866, which led to the passage of a liberal imperial public-school law in 1869 applicable to all the crown lands of Cisleithania.

Future Prospects.—The history of the German school system can look back upon a long development. It shows that the school has ever been closely connected with the most important interests of the German people and always nearly related to everything that has deeply agitated the people. It is obvious that the present time is anything but a time of satisfied repose in a position reached after long struggles; in many respects it is a time of investigation and transition. In the foregoing pages it has been the object to indicate this.

In the secondary schools (formerly represented exclusively by the gymnasium or classical school, now by a variety of school forms) modern education will not cease to claim equality with the classical; the future, perhaps, will have to decide whether it deserves equality with classical education. Of course, with reference to the separation of higher professions into learned and technical, it will have to be determined how far preparatory education and school organisation must provide for them. At present this is an open question in Germany. The lower high schools, so-called burgher schools, justly demand more attention and better development of their own char-

acter. The elementary school will need an undisturbed growth and continuous development in future, and will need to keep in contact with the entire intellectual life of the nation, especially in regard to the matter of instruction. Even the universities cannot decline to listen to the demands for improvement in their methods of teaching. Other questions will arise in future. A new social order and new transformations of science will not fail to demand the establishment of new forms of institutions and give the system new matter of instruction.

Those now living may desire that in the new much of the old may be preserved which has proved of benefit. In the *university* the liberty of teaching and learning, and the strictly scientific character of all that is taught; in the various kinds of *secondary schools* an education toward severe and, at the same time, free intellectual labour; in the *burgher schools* the endeavour to offer a rounded and well grounded practical education, and in the *elementary schools* the aspiration to perform the noble civilising task claimed for it, as far as the energy of society and the state will admit.

CHAPTER VI.

FRANCE.

MODERN France has its beginnings in the great Revolution. The history of education in France during the nineteenth century, just as much as the history of religion, or politics, or society, is the history of a persistent effort to realise the principles of the Revolution.

France was not without schools or school-masters of their kind in the years that immediately preceded the assembling of the States-General in 1789. A national purpose had drawn the king and the nobles to the side of the University of Paris in the struggle against the Church's efforts to control education. Victorious in the struggle towards the middle of the eighteenth century, the University strove to reorganise its methods and its courses. It took possession of the seminaries from which the Jesuits had been driven; it originated or enlarged the courses in law, in medicine, in letters, and in science; it organised the students of the capital into a compact body; it strove, though unsuccessfully, to regain control of the provincial colleges, and to add to the faculties in arts, classes in modern literature, modern history and modern science.

But in those days national purposes had little to do with primary education. King, nobles and University were alike indifferent to the great masses of

the people—" *les animaux à deux pieds à couleur bise*." To the Church and the religious Orders were due the few existing institutions of popular instruction. In the purely rural districts there were no schools: the peasants were too busy and the Orders too poor. Few towns, however, were without a burgher school (the *petite école* of history) conducted by the town elders, or a parish school under the curé's supervision, or a charity school maintained by a religious Order. In all cases the teacher was licensed by the clergy, and to the cautious supervision of the clergy was due, perhaps, the meagre course of studies,—reading, writing, counting, catechism, and church doctrine. The schoolhouses were wretched affairs,—narrow, of one story, without floor, desk, seat or text-books; the teacher was an underpaid, as well as an uneducated, menial,—“the sacristan or cripple of the village.”

Amid such conditions the great masses of the people were ignorant of the rudiments of popular instruction. Pre-revolutionary records show that fifty per cent. of the men, and seventy-five per cent. of the women of all classes could not sign their marriage certificates. “In conversing,” says Arnold in 1861, “with middle-aged workingmen in the French provinces, I found most invariably that my informant himself had attended school; more rarely that his father had attended it; that his grandfather had attended it never.”

Revolution and Education.—The watchword of the Revolution was “liberty of all, equality of all, progress of all in the light of reason.” “Liberty of all” created the sovereignty of the people. This new sovereign must be educated. “Equality of all” carried with it an equality of opportunity that comes from a uniform and gratuitous and national instruc-

tion. Progress with the masses meant the conquest of things present and things practical; education, therefore, must be modern and scientific. Is it surprising, then, that "the Revolution presented itself with magnificent promises of universal education?" Or that for the first time in Europe education became a national interest as much as war or commerce? Or that, in theory at least, education should be uniform, gratuitous, compulsory and utilitarian?

The Constituent Assembly decreed thus in 1791: "There shall be created and organised a system of Public instruction, common to all citizens and gratuitous with respect to those branches of instruction which are indispensable to all men." On behalf of a special commission to make effective this decree, Talleyrand outlined a splendidly modern, gratuitous and national system of education. Despite the support of the mighty Mirabeau, the early dissolution of the Assembly rendered abortive both decree and report.

Condorcet's incomparable report upon a system of public instruction was presented to the Legislative Assembly in 1792. Public morality and national progress were here based upon a national system of education. The sovereign people must be moral: give them ideals through education. The nation must conquer in material things: educate it in the practical sciences. Add to reading, writing, arithmetic, on the one hand the first notion of ethics, of human conduct, of social economy, and on the other hand the elements of surveying and measuring, of agriculture, and of mechanics. Let education be national, not clerical, gratuitous; universal. Even in details the spirit of this report was modern. There should be trained teachers. Schools should be classified as elementary, higher elementary, secondary,

and superior. Schoolrooms should be equipped with libraries, museums, scientific instruments. But this report went the way of all like reports in the Revolutionary days. The Assembly received it, but did not live long enough to consider it.

In 1793 the Convention, in its anti-clerical fervour, confiscated the property of all endowed seats of learning, and suppressed all teaching corporations, religious or secular, on the ground that "a truly free state must not tolerate within itself any corporate body whatever, not even those which, having devoted themselves to public instruction, have deserved well of their country." By the Daunou bill of 1795 it promised France a complete system of public instruction with primary, central and special schools, with libraries, museums, and the Institute; but without the means of enforcement, this measure was futile.

Guizot briefly sums up the Revolution's contribution to popular education in France as "*un déluge de mots, rien de plus.*" This is scarcely true. The action of the short-lived Assemblies may have been irregular and inconsistent, and the splendid enthusiasms of the Revolution may have resulted in plans too large and too generous for the age, but the dearth of action was not due wholly to wavering purposes or to visionary schemes. A national system of education called for money and the old régime had left France bankrupt; it demanded a civic organisation and France was disorganised; above all it needed peace and France waged a life and death struggle with foes from without and foes from within. The Revolutionists certainly planned well. In the proposals of Talleyrand, Condorcet, and Daunou is found the framework of a system which later France, with strange persistence in view of her fickleness in

other national interests, is gradually filling out at the close of the nineteenth century. And the Revolution did more than plan. "It established," says Arnold, "certain conditions under which any future system of popular instruction must inevitably constitute itself. It made it impossible for any government of France to found a system which was not lay, and which was not national." And it did more than establish conditions. In the *École Normale* at Paris it created the first French training-school for teachers, and in its *Écoles Centrales* it laid the foundations of the *lycées* of modern France. Many special institutions also trace their history back to the Revolution,—the School of Medicine at Paris, the Conservatory of Arts and Trades, the Bureau of Longitude, the Institute, the Museum of Natural History, and the *École Polytechnique*.

Napoleon.—In 1799 Napoleon began his work, to use his own words, of "founding a new society free alike from the injustice of feudalism and from the confusion of anarchy." His first duty was to re-organise the internal administration of the country. Starting with the Minister of the Interior and the Supreme Court of Paris, he organised a splendidly centralised system running through the departments, with their state-appointed prefects and receivers-general, their councils-general and their criminal courts, thence through the *arrondissements* with their sub-prefects and civil courts, to the communes with their state-appointed *maires* and their municipal councils. Such an organisation with its radiation of imperial authority downwards and outwards, through ever-widening circles until it reached the pettiest *maire* of a commune, was an excellent basis for a national system of education. The very excess of centralisation within this framework made easy all efforts to

separate education from other national interests, and to give it a unity of purpose and method hitherto claimed only by the army and the judiciary.

In his social reforms Napoleon could not free himself altogether from the traditions of the old régime. He had little sympathy with the masses. Moreover, thorough organisation for the education of the masses meant time and money and Napoleon lacked both. Such organisation might disturb, too, the vested rights of the Church and the Orders, and Napoleon was disinclined to arouse their open hostility. And yet he did not altogether overlook popular education.

In 1802, the communes were required to provide school buildings and pay the teachers' salaries, while the supervision of schools and teachers was committed to the new executive,—the prefects and the sub-prefects. Later, in 1805, jurisdiction in the matter of the personnel of the teaching staffs was transferred to the rectors. In 1808, the elementary course of instruction was defined, and its supervision committed to the academies. Recognising the great need of properly trained teachers, the emperor, in the same year, established in connection with the *lycées* and communal colleges, normal classes in which should be taught "the best methods for bringing to perfection the art of teaching children to read, write, and cipher."

Napoleon's success in the organisation of primary education was, however, inconsiderable. Primary schools, normal classes, and general inspection passed, in 1808, under the control of the grandmaster of the University, but he was powerless. He issued circulars of advice and instruction, but, without money or assistants, he could do nothing. The teaching personnel was bad. The rectors recognised as teachers all sorts and conditions of men. Napoleon,

by a general diploma, licensed the members of all the teaching orders. Local initiative was unfavourable to primary schools: a special report of 1809 shows that one-half of the communes were without schools or teachers. In accepting, in 1815, Carnot's report on popular education, Napoleon himself confessed his failure: "the plans and methods, hitherto used, have not gained the objects that are attainable."

But Napoleon had much sympathy with the middle and higher classes, and his great reforms lay in secondary and superior education. In 1802, he replaced the *Écoles Centrales* by his *lycées*. These *lycées* established generally in disused seminaries or colleges at the seats of the Appeal courts, exhibited in their organisation Napoleon's strong imperialistic purposes. They were residence-schools, under rigid state control and inspection, subject to strict military discipline in the matter of study-hours, dress, deportment, and penalties. Professors and officers were paid out of the boarding and tuition fees, with an appeal to the state in case of a deficit. Municipalities were required to supplement the state's grants by scholarships for local students, but, later, in justice to other secondary schools maintained by the municipalities, this obligation was cancelled.

The five years' course in these *lycées* was classical, with Latin, Greek, rhetoric, logic, moral philosophy, and, incidentally, ancient geography and history, but modern utilitarian tendencies were represented in the mathematical branches, in mechanics, and physics. French literature and the history of France were added to this curriculum. In earlier, as well as later decrees, Napoleon insisted upon a thorough training in the principles of morality and religion.

Despite the emperor's encouragement, the *lycées* grew but slowly. They were advanced schools for

which, as yet, the country did not possess preparatory schools. Their intensely military spirit was distasteful to many, the aristocracy still preferred the classical training of the clerical schools, while the mercantile classes saw nothing attractive in a curriculum scarcely more practical and scientific than that of pre-revolutionary times. In numbers there were only thirty in 1803, and thirty-six in 1813, with 15,000 pupils.

The law of 1812 recognised certain lower secondary schools already maintained by the communes, or by authorised teaching Orders, and promised state aid in the form of scholarships and salary gratuities to such of these communal colleges as should receive the state authorisation. At once 230 of these schools arose from the ruins of the seminaries of the unauthorised Orders. In these Latin, French, history, geography, and mathematics were taught, but in those situated near the *lycées*, provision was made for the full *lycée* course.

To provide *lycées* and communal colleges with trained professors, Napoleon, who never worked by half-measures, reorganised, in 1810, under the first scholars of the Empire the *École Normale* of Paris, and this residence school of 300 students, with its classical curriculum and its rigid military discipline, was the most efficient of his educational creations.

Napoleon, with his ministers Fourcroy and Fontanes, was naturally hostile to clerical interference with the national system of schools, but the Concordat of 1801 and the university decree of 1808 show his determination to compromise, so long as peace with the Church would further his plans for the unity of France and the aggrandisement of the imperial dynasty. The primary schools were to be under the jurisdiction of the prefect or rector, and yet, as we

have seen, a general decree licensed the Christian Brothers to open and conduct such schools. The *lycées* were lay institutions, with secular curriculum and staff, but the secondary schools of the Orders were also recognised so long as they acknowledged the University's right to inspection,—a right that was already exercised.

But Napoleon would not always compromise. The clergy possessed in the great seminaries (*grands séminaires*) special theological schools for the training of the priesthood. In 1809, they obtained from Napoleon authority to establish junior seminaries (*petits séminaires*) wherein the candidates for the priesthood should receive their preliminary and general education. These schools were classical, conservative, not wholly secular and not expensive, and thousands of French youths attended them without thought of the priesthood. Quick to see the danger to his national ideal, Napoleon strove to turn the flow of students towards the *lycées* and communal colleges, by exacting a special declaration and a special garb from all pupils of the *petits séminaires*, and by so curtailing the curriculum of these schools that their graduates could not hope to enter the higher special schools to prepare for the learned professions.

Napoleon's greatest work for education in France was his organisation of the Imperial University. He clung, as has been said, to the centralising traditions of the *Grand Monarque*. He admired the singleness of purpose and the regularity of the great Orders. He had little sympathy with the Revolutionary principle of "liberty of teaching." Throughout the fifteen years of his administrative life he strove to repeat in education the symmetry and unity that he had given to his political organisation. Education is a distinctly national interest to be committed, he

said, "to a body whose teaching may be free from the influence of the passing gusts of fashion, a body that may be kept moving, even though the government be lethargic, a body whose administration and statutes may be thoroughly national." This body he found in the Imperial University as established in the decrees of 1806, 1808, and 1811.

The new University, as a civil entity, could acquire and transmit property, receive and hold endowments. Its original revenues were derived from the confiscations of the old ecclesiastical foundations, from an annual state grant, and from a percentage of the tuition fees of the *lycée* students. At its head stood the grandmaster, with an administrative and advisory council of thirty members, and with several inspectors-general. Under this central authority, and scattered throughout France, each embracing several departments, and at the same time co-extensive with the courts of Appeal, were twenty-six academies. Each academy, with its council and rector, controlled all schools and school corporations beneath it, e.g., (a) the faculties of letters, science, law, medicine, theology, (b) the secondary schools, whether *lycées*, communal colleges or seminaries, (c) the primary schools. All nominations to teaching staffs, all licenses, authorisation, inspections, traced their source up through the rectors and grandmaster to the emperor himself. "No one could open a school or teach publicly without being a member of the Imperial University, and without having been graduated from one of its faculties." "No school could be established outside the University without the authority of its head." At the basis of the instruction in the various parts of the University lay the national purpose. Everywhere this great secular agency must inculcate a loyalty to the precepts of the Catholic

faith, and a loyalty to the imperial idea, and person, and constitution.

For the moment it seemed as if Napoleon had succeeded in shaping in the Imperial University a splendid instrument of the new imperialism. In reality he had failed. An imperial decree might organise, but it could not give life and *esprit de corps* to the organisation. Moreover the liberals were alienated by the emperor's sacrifice of the revolutionary principle of "liberty of teaching," and the church was embittered by his tolerance towards Protestant *lycées*, and by his attacks upon the Church's seminaries, while, in adjusting the courses of study to the new era, the University propagated ideas that were fatal to imperialism. In the subsequent history of France, too, the University was not permitted to realise the hopes of Napoleon. The Church remained hostile to such a powerful secular agency; the Restoration attacked it as a child of the Revolution; its revenues were diverted; in 1824, it became a ministerial department; in 1833 its special budget was suppressed; in 1850, its property was confiscated to the state, and its authority curtailed. But through all vicissitudes it exercised, in the ability of its officers, the scholarly devotion of its professors, and in its unique corporate life, an unequalled influence upon French education.

The Restoration (1815—1830).—The inconsistency and vacillation of the Restoration were due to the incurable defect inherent in a "traditional monarchy working with Revolutionary tools." The Bourbons were still Bourbons of the eighteenth century, while the laws, the social system, and the internal organisation of France were modern and republican. Urged on by the clergy and the aristocracy, Louis XVIII. on his first return, attacked the

University as "incompatible with the paternal intentions and liberal spirit of the past." The terrible *Cent Jours* saved it. On his second return he contented himself with replacing the grandmaster and his council with a commission of five "moderate" men, Royer-Collard presiding. The energy of this commission found expression in the liberal measures of 1816. In this year the crown gave its first special grant to primary schools in 50,000 francs for school books and for model schools. To distribute this grant, and, at the same time, to direct the discipline and supervise the teaching of morality and religion in the primary schools, the new law instituted a cantonal committee with royal, clerical, and university representatives. Beneath this, supervising the material condition of the schools, collecting fees, etc., stood the communal committee of the *maire*, the *curé*, and some important citizens. Meanwhile the rector's duties were enlarged. Not only must he, jointly with the prefect, appoint licensed teachers to vacancies, but he must also, by himself or by delegate, examine into the characters and scholastic attainments of all applicants for licenses, and, once installed, he must, in some sort, inspect their work.

But this liberal movement was short-lived. The assassination of the heir-apparent, the Duke de Berri, in 1820, alienated many moderate liberals, while the death of the great emperor at St. Helena in 1821, united imperialists and royalists in the support of the Bourbons. The king now became less conciliatory, the land-owning classes regained many lost privileges, press censorship was again enforced, and the Jesuits returned to France. The dismissal of Guizot and Cousin from the staff of the University, the withdrawal of Royer-Collard and De Sacy, the moderate liberals, from the Commission of Five, the increase

of that Commission in 1820 to seven, chiefly monarchists, under the name of Royal Council of Public Instruction, all showed the new temper in educational matters.

In 1821, normal classes in connection with the *lycées* were decreed instead of normal schools; later the *École Normale* was suppressed; and Abbé Frayssinous, a Jesuit, was appointed grandmaster of the University. The reactionary movement was not arrested by the coronation of Charles X., "a Bourbon, who had learned nothing and forgotten nothing." In 1824, Abbé Frayssinous became the first Minister of Public Instruction and Ecclesiastical Affairs. In 1820, the rectors had been instructed to license the Brethren of the Christian Schools on presentation of "letters of obedience." They were now deprived of the authority to examine or license the teachers of any brotherhood or the teachers of any private or clerical school, or even to inspect such schools. In all such duties the superior or bishop (or his delegate) replaced the rector. Under these conditions the Church soon dominated the administrative councils, the Jesuits and other unauthorised brotherhoods returned to take up their old work, and the secondary schools of the religious orders increased by leaps and bounds.

Reactions follow reactions with startling rapidity in France. In the elections of 1827 the conservative and ultramontane party was defeated and Abbé Frayssinous resigned. Again the Jesuits were driven from the country and their property confiscated. Restrictions were now placed upon the growth of the *petits séminaires*. Teachers' licenses might still be issued to members of authorised brotherhoods on the basis of "letters of obedience," but for all other teachers, lay or clerical, there must be a licensing exami-

nation, conducted by the rectors. Authorisation and inspection of all schools were again to be the prerogatives of the rectors,—a prerogative shared, however, with the councils of the *arrondissements*.

Monarchy of July (1830–1848).—A second and more violent reaction from ultramontanistism brought Louis-Philippe to the throne in 1830. The bourgeois sympathies of the new king, together with a grateful recognition of the forces that made him king, gave him a keen interest in popular education. His early advisers, Casimir P  rier, Broglie, Thiers, and Guizot, had long revolved the problem of national instruction, and accepted office with the determination to solve it. Imbued with the University idea, their early reforms were based upon Napoleon's conception of an independent educational authority. In 1830, the *  cole Normale* was reorganised, with larger endowments and more modern curriculum, and attached to the University. In the same year the *petits s  minaires* were again made subject to the University's authorisation and inspection, and in their courses of study were again sternly restricted to their special theological purpose, and by the law of 1831 the rectors once more assumed full control of teachers' licenses.

But these changes were merely preliminary to a great and comprehensive measure—the Magna Charta of public instruction in France. The special committee in charge of this measure—a committee, consisting of such men as Guizot, Cousin, Villemain, Renau, Th  nard—had before it the masterly reports of Cousin on the systems of primary education in Holland and Germany and the detailed statements of the five hundred inspectors delegated in 1833 to report upon the actual condition of primary education in France. These detailed statements tell a

sorry tale. Towns and rural communes were at one in their opposition to a state system of primary education. "We counted on meeting with gratitude," said the inspectors, "we have met everywhere with resistance." "Bring us money to mend our roads," said a *maire* to an inspector to whom he had just denied the ordinary hospitalities, "as for schools, we don't want them." Where primary schools existed the *curé* was often at war with the schoolmaster, and the character of the latter justified the hostility. He was poor and without honour in the land—a day-labourer, shoemaker, or inn-keeper. At times "the wife kept school while the teacher-husband went hunting in the fields." Physically he was often infirm, "the cripple of the village." "From the teacher without arms to the epileptic how many infirmities to pass through!" Relaxed licensing tests had reduced his scholastic attainments so that "he could not go beyond a mechanical performance in the simple rules in arithmetic and often could not write." "In what state is the moral and religious instruction of your school?" asked an inspector. "*Je n'enseigne pas ces bêtises-là*" was the significant reply. Equally discouraging was the condition of the school premises. Of 20,000 communal schools, 10,000 were conducted in stables, cellars, inns, church porches, or in the wretched homes of the teachers. The 10,000 regular school premises were "often hovels, dilapidated, windowless, fireless, reeking with damp, where in a space of twelve-feet square eighty children were crowded together, where the ravages of an epidemic swept the school every year." Of blackboards, desks, text-books, there were few or none.

The great measure, known in history as Guizot's, became law in 1833. Unlike all previous laws, in laying down obligatory conditions it provided means

for fulfilling those conditions. Unlike previous laws, too, it was comprehensive, tolerant in spirit, rational and practical. Later France has subverted many of its provisions, but its great principles lie at the basis of French primary instruction of to-day.

The new law carefully defined the subject-matter of primary instruction. "The indispensable minimum of knowledge" should include reading, writing and arithmetic, as in the meagre programmes of the Revolutionary day, and more—French grammar, the French system of weights and measures, and particularly the elements of moral and religious instruction. This religious instruction was to be given by the *curé*, but "the wish of the father shall always be consulted and followed in that which has to do with the children's participation in religious instruction."

Guizot saw clearly the limitations of this elementary curriculum. A numerous class called for more advanced training, and this class, not needing Latin and Greek, had been obliged hitherto to attend the secondary schools where Latin and Greek formed the largest part of the programme. For these a good French education was now provided in what the act called superior primary schools. Here the course of study, subject to the proviso that "the needs and resources of the locality should be consulted," included geometry with its practical applications in surveying and drawing, physical science, singing, and the history and geography of France.

The law, as has been said, was tolerant in spirit. While each commune of 500 souls, alone or in conjunction with an adjoining commune, must maintain a primary school, and each commune of 6,000 souls, or each chief town should maintain a superior primary school, it was enacted that all existing schools, public or private, lay or clerical, should re-

ceive public recognition, provided that all teachers were licensed and all schools inspected by the rectors. And further—while the same course of studies must be pursued in all schools—the greatest freedom was allowed in the matter of text-books, school buildings, school apparatus and even school fees. But, after all, primary education despite Cousin's appeals remained neither compulsory nor gratuitous.

With great difficulty Guizot maintained the Revolutionary principle of "liberty of teaching" in his provisions for the licensing of teachers. Any French citizen, lay or clerical, eighteen years of age, might conduct a school provided that he possess a satisfactory certificate of morality endorsed by *maire* or *curé* and a certificate of capacity issued after examination by a duly-appointed examination-commission. With this improvement in his professional status the law strove to improve the teacher's personal position. Hereafter the commune must supply a residence for the teacher, and a fixed salary of 200 francs to be augmented by the tuition fees, while the state provided him with a retiring pension.

Nowhere was the law more careful in its adjustments than in defining the separate jurisdictions of commune, department, and state. The commune, if able to do so from gifts, endowments or the revenues of communal property, must maintain the primary school unaided. Failing here, it might tax itself to an amount three centimes beyond the rate for general purposes. Failing then to realise the required sums, the commune should apply to the department for aid, and the department (if necessary) should tax itself for school purposes to an amount two centimes beyond the ordinary rate. Failing even here, the state must make up the deficiency. In intimate supervision of the school buildings, the repairs, equip-

ment, and fees, stood the communal committee. It consisted of the *maire* and *curé* (or protestant pastor) and one or two prominent citizens of the commune selected by *arrondissement*. Above the communal committee stood the committee of the *arrondissement* which supervised the internal life of the school and nominated the teacher from lists submitted by the communal committee. Above these committees stood the Minister and the Council of Public Instruction, who instituted teachers and heard appeals from teachers dismissed by the committee of the *arrondissement*.

Two administrative officials stand out prominently from these corporate authorities—the prefect and the rector. It was the former's duty to adjust the financial claims of the commune, department, and state, while the latter, as the executive officer of the central authority, exercised an absolute power in directing the professional methods of the class-room, in shaping the courses of study, and above all, in training, examining, and licensing the teachers.

The need of a corps of trained teachers was recognised in the provision for the creation of a primary normal school in each department. Guizot, as Minister of Public Instruction, personally recognised the need in his organisation of teachers' conferences and of normal classes for teachers already licensed, in his support of model schools with pupil-teachers, and particularly in his masterly series of circulars of instructions to teachers.

The new law was comprehensive. Citizenship was the inalienable right of all Frenchmen and it was the state's duty to train for citizenship. Hence arose the adult schools. In great industrial centres, at the option of the commune and aided by the state, evening or Sunday classes might be organised by the reg-

ular teachers or other qualified persons. The studies of these classes were very elementary in character, with marked utilitarian tendencies, embracing such subjects as reading, writing, arithmetic, drawing, singing, and certain phases of industrial work. Adult classes were very popular, especially in Paris, where they gradually passed under the control of the Brothers of the Christian Schools. Infant schools were a part of the same comprehensive plan. These schools had their beginnings in the Rhine Provinces in Pastor Oberlin's mothers' schools for neglected children. In 1816, Owen established similar mothers' schools in connection with his woollen factories at New Lanark in Scotland, whence the idea was transferred to Paris by Jullien in 1822. In 1826, Madame Pastoret organised in Paris a species of mothers' school or *crèche*, known as *salle d'asile*. In a few years Cochin, a philanthropic Parisian *maire*, and Madame Millet reformed the *salles d'asile*, eliminating the purely intellectual training and emphasising the physical and moral sides. These *salles* increased so rapidly that in 1831 a training school for teachers was opened, and in the law of 1833 the *salles* received state recognition. Thereafter they were to admit children between two and seven years of age and thus to protect them against the vices common to uncontrolled childhood. They should introduce them to the corporate life of the school, acquaint them with the simple notions of morality and religion, and give them good habits of mind and body. On the utilitarian side these *salles* freed the mothers from household cares and left them to the occupations of the fields and factories, whilst on their pedagogic side they represented France's practical way of working out the ideas of Pestalozzi and Froebel.

Such was the law of 1833. Its immediate effects

were remarkable. In 1829, primary schools were to be found in only sixty per cent. of the communes; in 1840, almost ninety per cent. possessed schools. Meanwhile the number of pupils increased from 970,000 to 3,200,000. Moreover the new school buildings were more artistic in design and hygienically more modern. Desks, chairs and tables suited to the size of the children now appeared, together with blackboards, writing and drawing models, reading tablets and a fairly complete list of text-books.

But it was in the methods of instruction that the change was most marked. The eighteenth and early nineteenth centuries with their meagre courses of study and their limited numbers of pupils preferred the "individual" or one-pupil-to-a-class method. With an enlarged curriculum and an enlarged school-population, and with the state's assumption of the expenses of popular education, this method disappeared from Europe. Guizot and Salvandi, as Ministers of Education, condemned it, and in 1840 it was employed in only 4,300 primary schools in France. The "mutual" method was not unknown in France. La Salle, Rollin and Madame de Maintenon had already commended or employed it, but it was after all the work of Lancaster and Bell in England that made it popular and practicable in France and throughout Europe. From the moment of its introduction it was bitterly opposed by the Orders as national and secular. It was new and liberal, and therefore dangerous, and it was immoral "because it destroyed the foundations of social order by delegating to children a power which ought to belong only to the man." The great educationists of the liberal school—Royer-Collard, Pasquier, Guizot, Salvandi—endorsed the "mutual" method, making "it a question as important as an article of the Constitution." It was demo-

cratic, and with a world to educate, it was cheap and convenient. But in practice if not in theory, the Orders were right. The "mutual" method failed in France as elsewhere. From 1840, when it touched the zenith of its popularity it gradually gave way before the "simultaneous" or class system in the urban schools, or before a mixed form of the mutual and simultaneous methods in the rural schools.

The progress of the superior primary schools was not remarkable. The communes objected to the expenses of maintenance. The clergy frowned upon them as liberal and utilitarian, while the parents preferred the dignity of the classical training of the regular secondary schools. Even the 161 superior primary schools in existence in 1835 strove to attach themselves to the secondary schools as preparatory schools, and thus lose their distinctive character. In 1840, Salvandi sought to magnify their importance by demanding graduation from a primary school as the condition of admission. He recognised their position as the secondary schools of the industrial and mercantile classes by adding book-keeping, chemistry, French history, and a foreign language to the curriculum, and by enlarging the courses in physics and drawing. Despite these efforts, however, there were but 15,000 enrolled students in the superior primary schools in 1843.

In 1833, Salvandi defined the courses of training, the organisation and the administration of the *salles d'asile*. No side of the child nature should be neglected. In games and gymnastics the physical side was to be trained, in the rudiments of reading, writing, and counting, with sewing and needle-work, the intellectual side, while songs, stories, and daily duties should strengthen the moral and religious side. Any commune might provide a building and with the state

grant engage a teacher for a *salle d'asile*. This teacher (a lady must be in charge, though the assistant might be a man) must be duly qualified with certificates of character and capacity after a special examination. The Minister with his Council at Paris was to have supreme control of the *salles*, assisted by a lady director appointed and paid by the state. Beneath these each department had its lady inspector and each *salle* its local supervising committee of ladies and visitors. Statistics show the great success of these *salles*. In 1835 there were but 120, in 1843 there were 1,500.

Guizot had been in doubt about committing the supervision and inspection of the primary schools to his communal and *arrondissement* committees. Events justified these doubts. The former committees were unfitted for the task, the latter were too distant to work effectively. Guizot then arranged for the appointment of an inspector in each department and later, with the rapid increase in the number of primary schools, sub-inspectors were added. To inspector and sub-inspector, acting under the rector, was committed, practically, the supervision of the intellectual, moral, and social life of the schools.

The obligatory clauses in the law of 1833 were not applicable to primary schools for girls. In France, tradition, the Church, and even the instincts of the Revolution were against co-education. Taught by failure in 1828, Guizot thought it wise not to legislate for girls' schools in the Act of 1833. In 1836, however, he authorised the creation of girls' schools apart from the regular boys' schools, and he provided for the training of female teachers and female inspectors. Salvandi, going further in 1840, insisted upon the distinction between the schools of the sexes, and condemned mixed schools. He recognised three

classes of girls' schools: (a) the ordinary lay school with a female teacher, specially licensed by the rector at the nomination of the commune and the inspector; (b) the residence-school, whose authorisation came from the bishop and the prefect; (c) the conventual or sisterhood school. The first two classes readily accepted the inspection and control of the rector. The third and by far the more numerous class were really free from all state, University or lay control.

Despite difficulties, due mainly to the expense of maintenance, and to the disfavour, if not hostility, of the aristocracy and clergy, the thirteen primary normal schools of 1830 increased to seventy-six in 1840. Admission to these schools was conditioned upon a certificate of morality from the *curé* or *maire*, and a certificate of capacity from the rector's examination-commission. The two or three years' course of study included the ordinary primary school subjects, a suggestion of methods of teaching, and instruction in law, conveyancing, commercial forms, general economics, agriculture and arboriculture (generally orchards and gardens were attached to the normal schools). Graduation came with an examination, and the teacher received his certificate of capacity, with exemption from military service on a written promise to serve ten years as a teacher. The growth of girls' primary schools necessitated the creation of normal schools for female teachers. Of these the first was established at Argenton in 1838 under teachers from a sisterhood. In 1843, there were sixteen of such schools conducted in general like ordinary normal schools. Like all French scholastic institutions both classes of normal schools were closely supervised by the rector and a commission.

Busy with the more pressing problems of primary education, the state gave little heed during this period

to secondary, or superior, education. The University, it is true, extended its old authority. Through its grandmaster and rectors it still controlled secondary education; it still supervised all academics, faculties, and colleges, and granted all degrees. But through the rectors it had added primary education to its domain of interest. Moreover, its grandmaster had become Minister of Public Instruction, and its council had become the Royal Council of Public Instruction. But on the whole the *lycées* and communal colleges did not prosper during this period, although buildings improved, teachers increased in numbers, and specialisation became more marked. These secular schools were unpopular. In deference to the bourgeois class, strong utilitarian tendencies began to appear in the curricula of the state schools. In 1826, mathematics were made more prominent, and in 1829 the modern languages were added to the curriculum. With the growth of the science departments, Villemain strove, but in vain, to create in 1844 a special science course parallel to the classical course. Similarly Salvandi attempted to popularise the communal colleges by classifying them as full-course colleges where classics predominated, and partial-course colleges where mathematics and science were most important. He, too, failed. On the other hand, favoured by the professional classes and the aristocracy, the *petits séminaires* increased rapidly in numbers despite the law of 1828. In 1844, there were but forty-six *lycées* in France and 312 communal colleges, while the secondary schools of the clergy numbered 1,016.

The Second Empire.—Urged on by the communistic temper of the republic, Carnot, the Minister of Education, would make primary instruction compulsory and gratuitous in form and utilitarian and republican in matter. The liberality of his plans an-

gered the clerical party, and the burdens of gratuitous instruction frightened the *bourgeoisie*. All fair-minded men resented, too, the Minister's efforts to propagate republican ideas through the teachers. The plan failed, and in the fall of the Republic its opponents did not forget that the schoolmasters had been its missionaries.

A special commission on public instruction now condemned the primary teachers as ill-trained, inefficient, and ill-mannered. Besides provoking a loud demand for reform of the lay teachers, the report brought great popularity to the private and clerical schools. Under these conditions was passed in 1850 the second great law on primary education in France, —*la loi Falloux*.

This law was a compromise. On the one hand, under the shadow of the second Revolution, it still promised "liberty of instruction." On the other hand it favoured the clergy at the expense of the secular University. The Minister remained grand-master of the University, but as Minister of State he presided over the new Superior Council of Public Instruction. This Council was to consist of representatives of the higher clergy, the military, the magistracy, the Orders, and even of the Protestants, all selected at first by the great bodies whom they represented, but subsequently by the Council itself. The President of the Republic added to this Council a permanent section of eight members which should form the real executive in matters of finance, discipline, and school organisation. By the law of 1852 this permanent section was suppressed, and the Council itself (now the Imperial Council of Public Instruction) was chosen by the emperor. This council was to be consulted on all projected laws or decrees, and was to ratify all programmes, methods, text-book

lists, even suspension of certificates. As grandmaster, however, the Minister was still executive officer of the Council, and still made all appointments of professors, inspectors, etc.

The attack on the University did not end with the organisation of the Council. By the law of 1850 the academies were made coterminous with the departments and the jurisdiction of the rectors and academic councils and inspectors correspondingly decreased. In 1854, however, the emperor, who had found this method too cumbrous, restored to the academies and rectors their old geographical position and most of their old jurisdiction.

By the law of 1850 the communal and *arrondissement* committees were abolished as ineffective. A cantonal committee, chosen by the council of the department, with little authority beyond a recommendatory jurisdiction, replaced them. Beneath this committee the *maire* and the *curé* (or pastor) supervised the internal economy of the school and the instruction in morality and religion. Above these was the council of the department which, after 1854, consisted of the prefect (who presided), the receiver-general, the bishop, and his delegates, and several crown-nominated members. This council of the department had extensive powers. It nominated the cantonal committee, and the examination commissions, it prescribed fees, authorised and regulated primary schools and suspended teachers. Beyond all the promptest, sternest, and most effective official of popular instruction was the prefect. With the advice of the inspector of the academy he could appoint, reprimand, suspend, but not expel any primary teacher.

The same spirit of compromise, if not of retrogression, appears in the new method of licensing

teachers. The normal school courses and the examinations for certificates of capacity were not abolished, but "equivalents" were freely accepted,—such as ordination to the priesthood, matriculation in any special government school, or endorsement by the academic council which was now dominated by the clergy. Moreover, all assistant teachers were exempt from the examinations, and female teachers—who were members chiefly of the sisterhoods—were licensed on presentation of "letters of obedience." Compromise marks, too, the new law's relation to the organisation of schools. Any commune might escape the obligation to maintain a primary school by paying for its indigent pupils the tuition fees in a private or church school of the locality. Academic councils were empowered also to authorise the creation of mixed schools (boys and girls) and girls' schools, both to be taught by the Sisters, and to recognise the existence of clerical schools, if necessary, one for each creed, in each commune. Indeed, the purpose of the new law was, it seems, to make public and lay schools the exception and church schools the rule.

The existence of the superior primary school was a menace to the rapidly increasing *petits séminaires*, and to please the clergy they were not mentioned in the Act of 1850. But the *bourgeois* temper of the Empire was utilitarian, and to satisfy that temper the elementary curriculum was enlarged by applied arithmetic, history, geography, agriculture, hygiene, levelling, drawing, singing, gymnastics, etc. Recognising the insufficiency of this substitute for the superior primary schools, the same law permitted communes to establish with state aid special classes for adults over eighteen and for apprentices over twelve.

The Empire was not forgetful of the *salles d'asile*.

In 1850 and 1855 provision was made for their careful inspection by the organisation of a graded staff of inspectors. The same decrees emphasised the importance of moral, religious, and physical training of children. In 1859, drawing and writing were eliminated from the curriculum. Under the later empire Gréard strove to assimilate the *salles d'asile* to the regular kindergartens by withdrawing the emphasis still placed upon pure intellectual training and increasing the songs, games, and physical exercises. Madame Pape-Carpentier, an enthusiastic Froebelian, in making self-activity the motto of her work, gave a new spirit to all child-training in France.

In response to the commission's report of 1850, *la loi Falloux* was a scarcely veiled attack upon the primary normal schools. The Minister, with the advice of the academy or the department on its own initiative, might abolish the normal school. For the training of pupil-teachers the academy might set apart, moreover, certain model schools in lieu of the normal school. For the rest, severe discipline, increased tuition fees, and a sadly abbreviated course of study would, in time, it was hoped, compass its destruction.

Secondary Education.—In the great commission of 1850, Thiers, Cousin, and Montalembert were a special committee on secondary education. Contrary to their recommendation the compromise of 1850 favoured the Church at the expense of the public *lycées*. The *petits séminaires* were left unchecked. With clerical predominance in the various educational councils and with the weakening of the authority of the rector, many communal colleges passed into the hands of the Church. Meanwhile the *lycées* did not increase in numbers, and in the presence of

the Church's opposition the grants to secondary education remained stationary. The utilitarian demands of the age forced Fortoul, the Minister of Education, to create a special science course for the Bachelor's degree and to emphasise the study of foreign languages, of French literature and French history.

For ten years subsequent to 1854 education was forgotten in the presence of the great military and political problems of the empire. In 1863, Duruy came to the Imperial Council of Public Instruction and began a masterly series of reforms. He saved the primary normal schools. Each department must maintain a normal school for male teachers, and nineteen departments were persuaded to create normal schools for female teachers. Duruy's typical normal school in Cluny was equipped with laboratory, library and workshop. It was surrounded by its own gardens and orchards. Students were trained in French literature, a foreign language, chemistry, ✓ physics, agriculture, mechanics, technology, law, drill, etc. To Duruy education was to some extent utilitarian. Reference has been made to the normal schools with their gardens, workshops, and laboratories. In the Museum of Natural History and the *École pratique des hautes Études* he emphasised the significance of agriculture and the higher mechanical arts. The adult schools, free lecture systems, night schools either created or reorganised by Duruy show in their curricula the great minister's leaning towards the practical and useful.

Other reforms showed his progressiveness. The public school curriculum was expanded by history and geography, just as the *lycée* course was strengthened in philosophy and modern history. Scholarships were offered to poor students in secondary schools, teachers' salaries were increased by statu-

tory enactment, assistance was given to the great French educational societies, and the right of inspection of all schools, public or private, was insisted upon. Above all a fearless effort was made to solve the problem of the education of girls. Aided by the empress and Dupanloup, Duruy strove by regulation to improve the equipment of girls' elementary schools. By the law of 1867 he reduced the minimum-of-population requirement for a girls' school in a commune from 800 to 500, and he increased the minimum salary of a female teacher. He encouraged normal schools for girls, admitted girls to the graduates' examination of the *lycées* and to the lectures at the Sorbonne. In organising in certain towns girls' classes for *lycée* instruction by *lycée* professors he angered the Church and lost the sympathies of both the empress and Dupanloup. He was forced to resign in 1869.

The Third Republic.—The six years that followed the fall of the Second Empire were barren in social or educational reforms. The National Assembly (1871–1875) strove splendidly to adjust France's finances to the great war indemnity, to organise the military forces and to formulate a constitution. Strongly anti-liberal, its remaining energies were given to a hopeless attempt to stem the progress of democracy and restore the monarchy. Since 1876 the new republic has fought its last battle with the monarchical idea and vindicated its right to organise and reform.

Back of the educational reforms of the last twenty-five years lie several controlling ideas. Germany won in the struggle of 1870 through her public schools. "The new Frenchman must by training be made perfect in mind, body, and conduct." Amid the horrors of the Commune France saw that the hope of the future lay in the dominance of the na-

tional will over the individual will. But that national will should be intelligent, and to be intelligent the citizen's vote should be intelligent. To the idea, moreover, that the child belonged to the state, not to the corporation, and that education was the state's interest, not the Church's was now added a conviction that "the great enemy is clericalism." But the foremost of all controlling ideas issued from the new economic movements. Amid industrial and commercial revolutions, "every Frenchman must be fitted, regardless of cost and complications, to defend his industrial patrimony against foreign competition and to wage a successful conflict in all avenues of national activity."

Although little was done in education between 1870 and 1875 there was no dearth of men or movements to indicate its needs. Ségris, who succeeded Duruy, promised gratuitous and universal primary instruction even in the last months of the Empire. During the war Simon declared that only in the development of her moral and intellectual forces could France be saved. The Commune excluded religious teaching from the schools of Paris, dispersed the Orders, and, for the moment at least, made primary education in the capital gratuitous and compulsory. Meanwhile in the National Assembly Thiers, Simon, and Gambetta, with tireless eloquence reiterated the truth that "ignorance is the source of despotism and demagogism: education is the great rejuvenator."

Louis Napoleon lavished the imperial revenues upon his great political and military schemes. It was Gambetta's most effective charge that the Empire had starved education. The first reforms of the Republic were naturally financial. The laws of 1875 and 1876 increased the minimum salaries of teachers and reorganised the pension fund, while those of

1878-81 made provisions for state loans for school buildings, and for state aid to museums, libraries, teachers' conferences, and adult classes. The era of great reforms, however, begins with the educational Commission of 1879. On its report Jules Ferry based a masterly series of laws whose purpose was "national unity through lay, free and compulsory education."

The clergy's participation in the anti-republican agitation of 1876 created considerable bitterness. The law of 1880 abolished the Church's universities and revoked their degree-conferring powers granted by a law of 1875. The same law recognised the Superior Council of Public Instruction so as to make it elective and representative of educational bodies and so as to exclude the prominent ecclesiastical element. In the same year all unauthorised teaching Orders (there were now one hundred in France) were dissolved by the House of Deputies, and despite the opposition of the Senate and the resentment of the clergy, Ferry enforced the dissolution. Three hundred secondary schools for boys and girls were violently broken up and the Orders in charge dispersed. With later compromises many of these Orders, especially of Sisters, returned and took up anew the work of education. In other reforms of this and the two succeeding years anti-clerical and pro-republican tendencies were scarcely distinguishable. Hostility to the Church was strongly mingled with a noble interest in democracy, in the laws which abolished all tuition fees in primary schools, normal schools and schools for adults, permitted communes to supply the children gratis with text-books and even food, and declared null and void all special certificates based upon "letters of obedience." The laws of these three years (1881-83) also insisted that all

teachers in primary schools—even in the *salles d'asile*—should possess the official certificates of capacity. They deprived the local clergy of their ancient rights of inspection and supervision, and the exclusion of the clergy as teachers and supervisors was followed by the exclusion of instruction in religion. The new republican curriculum substituted civil and moral instruction for the “elements of Christianity” and the catechism of republican principles for the catechism of the church. Henceforth—in the bitterness of the anti-clerical spirit—popular instruction must, “as to religion, be neutral if not unchristian.”

By the law of 1882 “free” education was given its natural corollary, “compulsory” attendance. “Liberty of ignorance alone was now proscribed.” Between six and thirteen all children must receive instruction in the indispensable branches, be it in the public, private or church school or even at home under the guidance of parent or tutor. Everywhere and under all conditions regular instruction in primary subjects was demanded by the state and enforced by special local commission.

In 1883 Ferry completed his great series of reforms by requiring the larger communes to establish public schools in outlying districts, and when established, insisting upon their maintenance at the commune's expense. The rapid extension of communal schools under this law subjected the state to heavy and irregular demands for aid in building. Moreover, political interests often induced the government to favour this or that commune. The law of 1885 strove to reduce state aid to building-funds to definite conditions. The wealthy communes were denied assistance; poorer communes should receive loans that varied with the wealth of the communes. In any case state aid should assume the form of annuities

to meet in a period of thirty or forty years a loan contracted by the commune. With the gradual decrease of the building movement, the state returned in 1895 to its former method of payment in capital.

The year 1886 brings us, after the Guizot law of 1833 and the Falloux law of 1850, to the third great law on French education. This law sums up and harmonises all past decrees and laws and definitely shapes French education in forms dictated by the great Revolution. Liberty of instruction is once more asserted. Private or church schools may be established anywhere, subject to a formal notification, and to the formal approval of the authorities. To these private schools liberty of instruction meant liberty in the choice of methods, of courses of study and even of text-books, provided only that the methods or the books were not hostile to the republican ideals.

Many communes neglected to establish primary schools for girls. Some declined to create additional boys' schools in the outlying hamlets; others still met the general obligation to maintain primary schools by paying the fees of indigent children at private or church schools. Under the new law authority to order the creation of a school in any commune was taken from the commune and state and given to the council of the department.

Very carefully does the new law prescribe the qualifications of the teachers in primary schools. All must be French citizens of unblemished character and conduct, and all must possess at least the elementary certificate of a teacher. Directors (*titulaires*) must hold, in addition, certificates of fitness in pedagogy. Age limits were closely defined. The Director of a residence school must be twenty-five years of age, of an ordinary school twenty-one years of age, while the male and female assistants

(*stagiaires*) were at least eighteen and seventeen years of age, respectively.

The bill strove at the same time to guard, in the matter of appointments, the interests of the teachers. The council of the department,—a body more or less representative of the teachers—is to prepare a list of persons legally qualified to teach in the department. From this list the inspectors of the academy, often with the advice of the *maire* of the commune concerned, is to select a name for recommendation to the prefect, and the prefect, with right to appeal to the Minister in case of dispute, is to make the appointment of the teacher. Thus it stood; the civil power (the prefect) must ultimately make his appointments from recommendations of the professional and university power (the inspector) and the inspector himself is guided by actual knowledge of the teacher, of his professional status, and of the wishes of the commune.

The inspector of the academy might at all times reprimand a public school teacher for cause, and, with the authority of the council of the department, might publicly censure any public school teacher in a public or private school. But only the prefect could recall an appointment to a public school and only on the recommendation of the inspector, as based on a finding of the council of the department.

It is interesting to notice here the development of this powerful professional body—the council of the department. In 1850, as we have seen, it was the council of the academy; in 1854, it became the council of the department. Throughout the emperor's reign it remained largely clerical in its sympathies, but by this law of 1886 the University element again assumed control. In it now sat the prefect as chairman, the inspector of the academy, the nor-

mal school directors, and several representatives of the public school teachers and other educational officers. The council dictated the creation of new schools, enforced the decisions of the Superior Council, regulated the general economy of the primary schools, disciplined teachers, supervised methods and programmes, received inspectoral reports and suggested reforms.

To this law of 1886 are also due the classification and organisation of a system of inspection of public schools which in its completeness is to-day unique in the civilised world.

In the fear of disturbing the action of this law, the financial clauses that were to accompany it were not passed until 1889. One of these clauses definitely settled the financial relations of state, department and commune. Hitherto the commune and department in succession had been required to tax themselves up to a fixed maximum rate and the state treasury met the deficit. Henceforth the state assumed the fixed maximum rate (equal to eight centimes on the department's assessment) and the municipalities met the deficit. Other clauses defined the various educational services for which the state, department and commune were respectively responsible, and fixed the salaries of the teachers in accordance with a careful classification. Male teachers (*titulaires*) were to receive 1,000–2,000 francs per year with residence, female teachers 1,000–1,600 francs, while teachers with interim or assistant's standing (*stagiaires*) were limited to 800 francs per annum.

The later resolutions of 1893 limited the state's obligation in the largest cities, but extended the application of the pension-law and provided more gen-

erously for inspectors and teachers of special subjects.

Concerning all these financial changes it may be said in brief that in the cause of education no country in Europe spends of her substance more generously than France, and certainly no country in Europe receives more efficient and at the same time more economic service.

The period of great reforms in primary education ends in 1886. For the last fourteen years of the century France has contented herself with changes in the details of organisation and administration. These details are best seen in a brief sketch of existing conditions.

The councils of the departments must direct through the prefect the erection of public school buildings; the commune must build, or purchase, equip, light, heat, and repair; the state may aid in the building with small grants. State regulations control largely the site, size and character of the building, and its surroundings in garden, orchard and playground.

School libraries are encouraged by both state and commune and have grown since 1862 to 42,000 libraries with 6,200,000 volumes. Subject to the approval of the rector, a special committee of teachers and other educationalists prescribes the text-books for the department.

Special commissions named by the rectors conduct the examinations for teachers. These examinations are generally both oral and written, and include, for the elementary certificate, spelling, composition, arithmetic, writing, drawing, gymnastics, reading, history, civics, geography, music, science, and agriculture; and for the superior certificate (a) arithmetic (applied), applied geometry, physics, hygiene,

agriculture, horticulture, literature, ethics, drawing, and modern languages, (b) education, French history, geography, book-keeping, algebra, geometry, measuring, chemistry; and for pedagogic fitness, an essay on an educational subject, practical teaching, and tests in school management.

In developing pedagogic knowledge the cantonal conferences of teachers, first recognised in 1880, have been no unimportant agency. The state provides another stimulus in an advancement in classification and salary and in "honourable mention" on the recommendation of the inspector of the academy.

All subjects of the primary schools are found in embryo in the simple curriculum of the lowest grades. Through the grades the training is persistently physical, moral and intellectual, and of recent years decidedly professional and technical. The subjects include moral and civic instruction, reading, writing, the French language, arithmetic and the metric system, history and geography,—especially of modern France,—information lessons on common subjects, singing, drawing, the elements of natural science, gymnastics, military drill, manual training, and hygiene and temperance. Manual training was recognised by law in 1882, but on the whole it has not yet justified that recognition. The supply of trained teachers has been inadequate, the expense of workshops has been too great, and the course of training has practically limited itself to paper and woodwork. Despite this, the recent movements in primary education tend to emphasise the utilitarian at the expense of the educative. School hygiene and school drawing have now definite practical aims. Arithmetic has become book-keeping. Agriculture, everywhere obligatory, is in many schools taught experimentally in the adjoining fields or in the garden plots and or-

chards which the communes have been permitted since 1887 to attach to the school premises. In 1898, the Minister added to the curriculum of the coastward schools information lessons for sailors and fishermen. Since 1882 girls have been taught to sew, cut, fit, etc.

Primary education is obligatory in France, but for reasons that apply in all democratic countries the law is not universally enforced. In large or congested districts indigent children escape the eyes of the local commission, and the commission is not energetic in enforcing attendance in the industrial centres or in districts far removed from the school site. To aid indigent children the state recognises and assists the "*caisses des écoles*" which supply clothes, books, etc., and has authorised the creation of *cantines scolaires* which may provide meals. In any case the attendance obligation which terminates with the age of thirteen years, terminates with the age of eleven in the case of children who are awarded "certificates of studies." These state certificates are based upon an oral and written examination in the elementary subjects of dictation, arithmetic, French, with agriculture, or drawing, or needlework,—and are conducted by a special examination commission.

The decentralising tendency of recent educational movements in France is evident in the development of the power of the council of the department and in the increasing influence and authority of the teacher. It is evident also in the large deference paid to local option in the technical side of popular instruction. But nowhere is it more evident than in the multiplicity of private associations for the completion or prolongation of the comparatively limited primary school course.

Classes for adults did not prosper between 1870

and 1890. However, the Society of Elementary Instruction, the *Philotechnique*, the *Philotechnique* of Paris, the *Philotechnique* at Bordeaux, and the Rhone Society of Instruction organised or continued their evening classes, and in 1894 were joined by the French League of Education. In 1895 the state, urged by these societies, reorganised the courses for adults leaving a larger option to the local authorities. The result appeared in a remarkable growth in attendance at evening lectures and conferences, especially of a practical character. School libraries were opened to the public, popular institutes were conducted in more remote districts, and even university extension courses were undertaken. The growth of associations in behalf of popular instruction, chiefly after 1890, was marvellous. Paris and the department of the Seine alone boasted 170. On its social side this extra-school agency has developed Children's Savings Banks (whose popularity is now waning), Children's Mutual Benefit Societies (whose influence is spreading), Patronage Societies to guard the interests of the children, Temperance Societies, and Fresh-Air Societies.

A few words as to the administration of education must suffice. At the head of the central administration is the Minister with the Superior Council (and its Permanent Section), the Consultative Corps, inspectors-general, and bureaux. The Minister directs the public schools and supervises the private schools with respect to the qualifications of the teachers, the hygienic condition of the premises, and the moral tone of the instruction. He appoints and dismisses teachers except where the president or prefect or inspector of the academy acts. Limited by the council of the department, the council of the academy, the new councils of the provincial uni-

versities, and by an appeal to the Superior Council, he disciplines all teachers. He prepares the budgets, and makes all payments; he issues all circulars of instruction, and is the court of appeal from all lower tribunals. Finally, he consults, under certain conditions, the Superior Council or its Permanent Section, the Consultative Corps, or even the Council of State, and he administers through the bureaux of the department.

The Superior Council as defined in 1880 and 1898 contains 57 members, almost all of whom are educationists chosen for four years by their colleagues in primary, secondary, superior or "special" education. Nine of these are nominated by the President and these nine (who are generally inspectors or directors) together with six fellow members named by the Minister, constitute the Permanent Section to whom questions concerning new regulations, courses of study, text-books, new college chairs, etc., are submitted for report prior to consideration by the Superior Council. The Superior Council on its part has some administrative and disciplinary together with general advisory powers. It is a final court of appeal.

The Consultative Committee consists of three sections, corresponding to the divisions into primary, secondary and superior education. Its members are educationists named by the Minister to advise him with regard to normal schools, private schools, promotions in officials, etc.

The Inspectors-General who belong to the different sections of the central administration are general information officers. They receive reports from the departments with respect to all sorts and conditions of schools and at times they inspect. They suggest changes, promotions, regulations to the Minis-

ter, and they direct the execution of the Minister's orders. As no unimportant factor in the central administration must be mentioned here the *Musée Pédagogique* with its magnificent pedagogical library and its pedagogical publications.

With regard to the local administration of education, rectors now possess much of their old authority. Speaking in general terms, they represent the Minister in the academy in all departments of education, primary, secondary, or superior. They bear the Minister's authority towards private schools, supervise all inspectoral work, and appoint all examination commissions. Normal schools and superior primary schools with *lycées* and the higher schools are specially within their jurisdiction.

The rector's chief assistant and representative is the inspector of the academy whose jurisdiction is now limited to the department. His duties, together with those of the prefect, the local commission, and the council of the department, remain as defined by the law of 1886. The Primary Inspector, one of whom is appointed by the Minister for about 150 schools, is a university officer, and reports through the inspector of the academy to the rector.

Superior Primary Schools.—The Third Republic saw a solution for the problem of modern industrialism in a resourceful and skilful citizenship. With this thought uppermost it grappled with the question of advanced primary education. A few superior primary schools with utilitarian tendencies had survived the Empire, but the existence of these was largely due to local initiation and insistence. In 1878 the state made its first modern grant (110,000 francs) to advanced primary schools. Certain communes or departments had established apprentice-schools in industrial centres or higher grade "pro-

fessional" classes (*classes complémentaires*) in larger towns, and by the Act of 1880, these were attached by law to the regular primary school system. In its report of 1881 a special commission on Advanced Primary Education, in emphasising the professional or technical side of advanced primary instruction, declared that the "Superior Primary school was by no means a degenerated college but a primary school completed." On this basis France has organised her present system of advanced primary education.

The Act of 1881 made advanced primary education free, while the great law of 1886 organised in broad outline superior primary schools and the higher grade classes (*cours complémentaires*). The regulations of 1887 filled out this statutory framework by prescribing the amount of state aid to the scholarships, salaries, and equipment of the higher schools, and by defining the differences between the superior primary school and the higher grade school (*cours complémentaire*).

The higher grade class (*cours complémentaire*) was to be a part of the elementary school, conducted in the same building, although in a different room, by a master possessed of the ordinary qualifications and appointed by the prefect. The course of study included the primary subjects in more advanced stages and one or more of the special branches, and required one year's attendance. The special school equipment was meagre—at most, a wretchedly served workshop. On the other hand, the superior primary school was a distinct organisation, under a director with special qualifications, appointed by the Minister, and equipped with laboratory, gymnasium, garden, orchard, workshop, etc. The course, too, required three years' attendance. Nothing marked more clearly

the contrast between these schools than the superiority, scholastic, social, and financial, of the director of the superior primary school over the master of the higher grade school.

The purely professional side of superior primary education was not emphasised in the law of 1886-7, despite the more and more insistent demands of the age. In 1888, however, the "manual apprentice" or "professional" schools were fully organised under the jurisdiction of the Minister of Education on the academic side and commune on the professional side. The selection of the particular branch of commerce or industry to be developed in a "professional" school was left to local initiative, provided that if commerce be chosen modern languages should be an important part of the curriculum, and if industry, then some form of manual training. In all schools, however, careful training in the academic subjects was rigidly enforced during the three years of the course.

All new advanced primary schools must decide as to the form they shall assume—that of the apprentice and professional school under the joint jurisdiction of the two Ministers, or that of the superior primary school under the Minister of Education. In both cases the entrant must be twelve years of age and must hold the ordinary "certificate of primary studies."

Thus, then, the law now recognised two distinct classes of advanced primary schools, (a) the superior primary school and *cours complémentaires* in which the literary or culture side predominated, and (b) the professional or apprentice primary schools in which the technical or professional side dominated, although the culture side was not neglected.

Despite the encouragement of the Republic, these

schools did not at first prosper. The distinctions between the various classes were not clearly marked. The relaxed regulations of the superior primary schools were a standing temptation to imperfect or too ambitious work, while the character of professional training was as yet very vaguely understood. The material equipment, too, was inadequate and the masters were improperly qualified. It was not till 1889 that the Republic earnestly set about providing proper buildings and material equipment, training better teachers, and above all defining with greater exactness and significance the purposes of the schools. It defined the superior primary schools as prolongations of elementary schools whose character and methods they repeated so far as possible. Whilst they should fulfil a double purpose in pointing forward to the practical life of the child and backward to his earliest steps in knowledge, they were after all primary schools forming "anything but an unfortunate counterfeit of secondary education." As training-schools for complete living they were "professional" in only the most general sense. In a new way they replaced the old apprenticeship, and yet were not an apprenticeship. "The superior primary school was a school, not a workshop; it had pupils, not apprentices." In brief it was the completion of primary education joining hands with the beginning of professional training.

But this is an industrial age. Naturally here and there throughout the country the "professional" side of these schools was emphasised. Certain superior primary schools became, in spirit at least, scarcely distinguishable from the apprentice-schools. Their dominant interest became utilitarian; they strove "to develop among those who intended to enter the manual professions the necessary dexterity

and technical knowledge." Recognising this movement and fearing the traditional influences of the education office in favour of general culture, the law of 1892 permitted the superior primary schools with marked utilitarian tendencies and the apprentice (or professional) schools to be attached to the Department of Commerce under the name of Practical Schools of Commerce and Industry. Thirty-three schools now form no insignificant part of the administrative domain of the Bureau of Technical Instruction under the Minister of Commerce.

The law thus recognised three classes of advanced primary schools, viz:—(a) the superior primary and higher grade (*cours complémentaires*) schools, whose purpose is still purely educational and whose organisation and administration originate with the department of education; (b) practical schools of commerce and industry, whose purpose is more largely professional and whose organisation and administration originate with the Minister of Commerce; (c) a small class of apprentice or professional schools midway in character between the other two and subject to the joint jurisdiction of the Ministers of Education and Commerce.

A few of the more marked features of the superior primary schools may be referred to here. Superior primary schools are the higher grade schools for children of the working classes and for such other children as must apply themselves early to the business of life. In recognition of the tendency towards professional training, the law of 1893 increased the number of special professional subjects and insisted that one or more of these subjects should form part of the curriculum of every superior primary school. Modern decentralising tendencies are evident in the freedom with which each locality may select that

special subject. The superior primary course of studies for boys continued and developed the primary subjects, including the French language, the history of France, geography, common law, civic and moral instruction, and, especially for communal students, the modern languages. On the science side it embraced algebra, geometry with its applications to actual life, arithmetic with accounts, commercial transactions, book-keeping, physics, botany, and chemistry so co-ordinated as to converge on hygiene, agriculture, technical pursuits, etc. On the manual training side the course might include drawing, shop-work in metal, wood, etc., gardening, farming, etc. Finally of late years, the superior primary school has attached much importance to singing and gymnastics.

The courses in the girls' superior schools correspond, with slight deviations, with those for boys. Mathematics are not so prominent in the girls' schools, nor are the experimental sciences, and domestic science with its applications in sewing, nursing, and house decoration, horticulture, etc., are substituted for the manual training of the boys' schools.

State aid to superior primary schools has of late assumed the form of grants towards the expenses of laboratories, towards the salaries of teachers, and for scholarships. Maintenance scholarships of 400-500 francs each are open annually for competition to candidates for "the certificate of primary studies" between the ages of twelve and fifteen. The examination, oral and written, is based upon the subjects of the primary course, is conducted by a special examination commission named by the rector and must be taken by every student who wishes to enter a superior primary school. In allotting the scholarships the prefect, advised by the inspector of the academy and the council of the department, considers the re-

sults of the examinations and the domestic and financial position of the candidates.

Superior primary schools are supervised by a special local committee consisting of the rector, the inspector of the academy, the primary inspector, the director of the superior primary school, and a few nominated citizens (ladies for girls' schools). This committee has charge of the general economy and discipline of the school, it controls all expenditures, buildings and repairs, and selects the special professional branch to be emphasised in the school. Above this committee the inspector of the academy has a special advisory and administrative authority, while above both inspector and committee stand the Minister and a special advisory committee.

Brief mention should be made of the national "professional" schools. A special commission, reporting in 1881, declared in favour of great national technical schools which communes and departments, subject to local conditions and initiative, might initiate. The Institutes of Vierzon, D'Armentières, Voiron owe their existence to this report. These splendidly-equipped technical schools are subject to the Ministers of Education and Commerce and to special inspectors from each department. Scholarships are numerous, the attendance very large, and the course of studies as "broad as the life of the citizen."

Salles D'Asile.—In 1881 the *salles d'asile* were reorganized as *écoles maternelles* (mothers' schools), in which children of both sexes, between the ages of two and six, should be trained gratuitously. The commune must provide and maintain the school premises, with lodging for the directress, while the state guaranteed, under the laws of 1889 and 1891, the salaries of the directress and her assistants. The

directress must be at least twenty-one years of age, and must hold the ordinary primary school teacher's certificate, and must have taught as an assistant in an *école maternelle* for at least two years. The health and comfort of the children, the general conditions of the school premises, together with current expenditures, are now supervised by a small local committee of ladies selected by the inspector of the academy, and presided over by the *maire*. The general control of the work of the *écoles maternelles* rests with the councils of the department, while the Minister appoints and directs a staff of specially qualified inspectors. The law of 1881 emphasised the significance of the *école maternelle* as an intermediary between home and school. It should unite "the gentleness and indulgence of the former to the industry and regularity of the latter." In the surroundings and equipments of the buildings—the orchards, gardens, playgrounds, playrooms—in the regular medical inspection, in the care of housemaid and directress, in the minute details of the child-life throughout the day, the regulations strove to reflect "the anxieties of an intelligent and sympathetic mother." Despite a traditional dislike of co-education, the state has insisted that these schools "resemble the true family where both sexes ought to live harmoniously and decorously side by side." While the children are classified into only two sections on the basis of age and physical development, "no children, however young, are to be sacrificed in these schools." Since 1890 the influence of the Froebelian kindergarten has become more evident in the obligation to introduce objects into the games and in the greater importance attached to songs, talks and "self-creative activities." The existing curriculum neglects no part of the child nature, physical, moral, or mental. In more or less

modified form it includes games and gymnastics accompanied by song, manual exercises with papers in colours, and with blocks in forms, language lessons in stories, recitations, etc., information lessons about simple objects, and the rudiments of reading, writing and arithmetic.

Classes Infantines.—Duruy attempted in 1867 to organise “intermediate” classes which, coming in between the *salles d’asile* and the primary schools, would carry into the primary schools some of the methods of the *salles*. In 1876, at Paris, M. Gréard organised two “infant classes” of boys from six to eight, and attached them to girls’ primary schools. Similar classes of children from four to seven years were formed about the same time in Ardennes, under the name “introductory classes.” In 1880, Ferry recognised this movement in a recommendation to the communes whose primary schools were overcrowded to create overflow schools of children of both sexes under seven years of age, and attach them, under lady teachers, to the regular primary schools. From these diverse conditions arose two kinds of *classes enfantines*; (a) those in cities or larger communes where *écoles maternelles* already existed, and where *écoles enfantines* should form merely another span in the bridge between the home and the primary school; and (b) those in the poorer communes, where they replaced the *écoles maternelles* and prolonged their methods.

The law of 1881 acknowledged the rights of small communes to a state grant for “intermediate” schools. In 1886 “intermediate or infant” schools were duly recognised, and the conditions of their creation, equipment, and organisation carefully outlined on the same basis as the *écoles maternelles*. As defined in 1890 the training began at four years of

age, and included physical, mental and moral instruction in advanced forms of the subjects of the *écoles maternelles*.

Training of Teachers.—The decline of the primary normal school was arrested by Rouland, Minister of Public Instruction, in 1856. Between 1863–69 Duruy reorganised both its courses of studies and its professoriates. Female applicants, who were unable to obtain admission to the nineteen normal schools for women in 1870, sought their training in normal classes in connection with the large primary schools of the sisterhoods. In 1879 Ferry imposed upon each department the obligation to maintain two normal schools, one for males and one for females, and in 1899, eighty-seven normal schools for males and eighty-seven for females were the response to this obligation. In recent years the increase has not been great. The wretched salaries of the primary teacher in France, the withdrawal of the exemption from military service, together with the attractions of modern industrial and commercial life, have caused such a decrease in attendance that several normal schools have amalgamated with neighbouring normal schools.

Under the law of 1879 the state appoints, and pays the salaries of all professors and special teachers, meets the deficits, if any, in the boarding-house accounts, while the department is responsible for the maintenance of the building, for equipment and apparatus. General regulations concerning the normal schools are issued by the Minister on the advice of the rectors and inspectors-general. The rector, acting on the advice of the inspector of the academy, directs the staff and the work in accordance with these general regulations. Beneath these an administrative council, consisting of the inspector, rector, and repre-

representatives of the council of the department has a recommendatory jurisdiction in matters of expenditure. The internal discipline and economy of the schools are under the control of the director and staff. The director, or directress, of a normal school must be at least thirty years of age, and must possess a degree in arts, together with a special certificate of qualification for normal school work. The director's salary, exclusive of board and lodging, varies from 3,500 to 5,500 francs per annum; the directress', from 3,000 to 5,000. Professors or assistants must hold superior primary certificates and special qualifications for normal school work. Their salaries vary from 2,500 to 3,400 francs for men, and 2,200 to 3,000 francs for women. Applicants for admission to a normal school must be sixteen to eighteen years of age, must hold "certificates of studies," and must pass a searching competitive examination on primary subjects. In former years these applicants were trained as monitors in elementary schools, and more recently in superior primary schools, where the evil effects of their presence upon the practical work has caused much regret. Since 1880 the discipline of the normal schools has been greatly relaxed. The cloister-like severity of the old methods has given way to the naturalness, brightness and freedom of the social ideas of the new Republic.

By the law of 1881 the three years' course of the normal schools was organised to include on its literary side, psychology, ethics, pedagogy, French, history, geography, and one modern language, and on its scientific side, arithmetic, geometry, physics, chemistry, natural history, manual training, drawing, singing, gymnastics, hygiene, and (since 1897) temperance. In the girls' schools, needle-work and domestic

science with its allied branches, decoration, nursing, etc., replace the manual training of the boys' schools.

While moral and civic instruction is compulsory in these primary normal schools, religious instruction has been forbidden since 1886.

Each normal school possesses a library, large grounds with gardens and orchards wherein the students are trained in arboriculture, horticulture and other phases of agriculture, a laboratory for special scientific work, and (in boys' schools) a workshop for training in woodwork, modelling, sculpture, etc. In addition each normal school has, annexed to it, a "practice" school of the elementary grade, and each normal school for girls an *école maternelle* for practice. Training in these practice schools has been compulsory since 1890.

Nowhere is the French school system so logical or so complete as in its training-schools. To train the professors in the primary normal schools and the directors of superior normal schools, the state maintains two superior normal schools, one for females at Fontenay-aux-Roses, and one for males at St. Cloud. Ferry established the school at Fontenay-aux-Roses in 1880, with a two years' course, under the control of a lady director with a staff detached temporarily from the professoriates of neighbouring faculties or *lycées*. By the law of 1897 it became an exclusively residence school, with a three years' course, to which applicants who were twenty-five years of age and possessed degrees in arts or superior certificates, were admitted after a competitive examination. This three years' course embraced an advanced training in general pedagogy and in alternative courses in letters or science, with practice teaching in neighbouring schools.

In 1882, after a transient existence at Sèvres, the

superior normal school for males was established at St. Cloud on the same principles as that at Fontenay-aux-Roses. With the dissolution in 1884 of the national normal school for teachers in manual training, a course in that department was added to St. Cloud.

Board, lodging and tuition are free in all French training schools; even travelling scholarships are sometimes provided by the state. Students enter at fixed ages on proof of satisfactory character and academic standing and with a competitive examination, written and oral. They encounter test-examinations at the end of each year of their course, and they graduate with an examination and a declaration to serve for ten years as teacher in France.

Secondary Education.—In response to the growth of the *bourgeois* sentiment in the later days of the Second Empire, Duruy organised the work of the secondary schools into two clearly distinguishable courses, viz:—the full or classical course leading to the Bachelor's degree in letters or science, and the special course leading to the special degree of secondary education. The classical course included the preparatory classes into which the boy, who could already read and write, entered at eight years of age, and from which at eleven years of age he passed into the elementary grade of the secondary school proper, and thence through the grammar and superior grades to graduation in a state examination for the Bachelor's degree at eighteen years of age. In the preparatory classes the primary subjects with Latin and manual training formed the basis of the boys' work. Within a few years of graduation the ordinary course in classics, French, moderns, science, history and geography bifurcated, and students turned towards the modern side to graduate in one examination as Bachelors in Science, or towards the literary

and philosophical side to graduate a year later with two examinations as Bachelors in Letters.

Side by side with the full courses ran the Special secondary course of six years with its strongly commercial purpose, to some degree co-ordinated with the work of the primary schools. It received students from the primary schools, and elaborating the subjects of the primary schools, added a special training in modern languages in lieu of classics.

The very success of these reforms (sixty per cent. of the secondary students were soon enrolled in the Special and Science courses) aroused bitter opposition. The professional and literary classes protested against courses by which, in increasing numbers, graduates avoided the elevated and more philosophic training of the last years in a secondary school, and they protested against exemptions from classical training. The supporters of state education generally attacked a curriculum whose relaxed conditions permitted students from private schools to win the Bachelor's degree without attendance at the state schools. But these objections to reforms already made, were insignificant in comparison with the objections to what was not reformed. The secondary schools were out of sympathy with democracy and the new France. They were still in method and purpose fac-similes of their originals—the schools of the Jesuits. Their exclusive residence spirit, the rigidity, and minuteness of administration and discipline, the machine-like classification and organisation of staff and student body, and, to a great extent, the antiquated matter and methods of instruction enforce this similarity.

But it was difficult to reform the *lycées* and communal colleges. They created in their graduates the professional men and the servants of the state, a cul-

tivated caste who dominated the official life of the country, and were conservative. The Republic, fighting a great battle in the cause of primary education, was, perforce, indifferent, as to the fate of secondary instruction. As yet, splendid as was the opportunity with such a centralised system, the idea of co-ordinating the courses of study of the primary, secondary and university schools had not come to French educationists.

The great Simon strove to meet some of these objections in circulars of instructions issued in 1872. These laid stress upon greater freedom in conduct for the pupils and greater freedom in method for the professors. Military exercises, sports, even excursions, should brighten the monotony of desk life. To compete with private secondary schools, the state schools must show greater elasticity in methods, larger sympathies, and more individuality. School methods must get away from the word to the idea. Verse-making in Latin, themes in Latin, Latin rote-work must give place to Latin literature.

State education of the mothers of the citizens was the logical complement of state education of the citizens. To be national and consistent a state system should include a system of secondary education for girls. Hitherto the girls had been shamefully neglected. For them there were no secondary schools unless it be the schools of the sisterhoods,—and in these the training was the exclusive, unpractical, and sentimental training of the cloisters of the day. The change begins with the admission of women to the faculties in Paris in 1868. Reference has already been made to Duruy's plans for the higher education of girls. These plans took practical shape in 1880 in Ferry's creation in large centres of *lycées* for girls. These *lycées* were residence-schools, with lady pro-

fessors, and with a five or six years' course, to which girls were admitted from primary or conventual schools at twelve years of age. On the academic side of the course of study French literature and the literature of modern Europe replaced the classics; history and geography were generously recognised, while science and mathematics were represented in name only. On its practical side the spirit of the new democracy appeared in domestic economy, needle-work, nursing, drawing, etc. Religious instruction was not a part of the course. In 1882 a special appropriation was made for girls' secondary schools, and so effective was this grant that in 1899 there were in France twenty-three *lycées* and twenty-five communal colleges for girls.

Ferry's reforms in secondary education were not limited to the organisation of girls' schools. To meet the protests against over-pressure, he revised the curriculum, reducing the course in Latin. Striving to popularise higher education, he opened the secondary schools to pupils from the primary schools. In recognition of the importance of secondary education, he increased its representation in the Superior Council.

These reforms, however, did not reach the root of the matter, and between 1880 and 1890 discontent with secondary schools grew apace. Finally, a special commission emphasised the evils already mentioned and recommended certain reforms. The laws of 1890 and 1891, with explanatory circulars and regulations, realised these recommendations. Like the other educational laws of the decade, these measures show a change in national tendencies towards decentralisation. Encouragement is given to the free initiative of the professors as to time-tables, the re-organisation of classes, and even the classification of the

staff. School life became more natural and freer. Over-pressure and over-work are met by an insistence upon physical training and by a curtailment of the courses of study. Methods, too, became more modern in the effort to study the classical literatures and histories instead of the classical languages, in the increase in French literature and the decrease in written and rote work, in the rapid growth in laboratory equipment and practice, and in the acceptance of the new pedagogical law of variety in work. The scientific and literary courses of the secondary schools were left identical until the final or philosophy grade was reached. Into this grade all boys must enter by one examination, but in it three courses are presented as electives, viz.: (a) letters and philosophy, (b) letters and mathematics, (c) letters and natural science. Literature or letters thus forms the basis of training, and to this extent the reactionists have won in their struggle against science. On the other hand, graduates in science or mathematics now possess the same prestige in the eyes of the French social world as those in philosophy.

To correlate the course for the Bachelor's degree with the primary school courses, as demanded by the new democracy, and rendered necessary by the steady growth in popularity of the private secondary schools, the Special secondary course was now reorganised to include to some extent the literature of modern Europe, modern law, history, civics, practical ethics, and the industrial sciences.

From 1891 to 1900 two purposes seem to direct the movements in secondary education. Decentralisation becomes more evident in the greater freedom in professional control and in the local election of the subjects to be taught. The second purpose—to popularise the *lycées* and communal colleges, can scarcely

be dissociated from the first. The Republic strives by democratic curricula with a generous list of electives, and by numerous scholarships, to attract the children of the masses into the secondary schools. Back of both these purposes lies the desire to protect the state schools against the successful rivalry of private schools. This desire has increased the professors' authority in recommending candidates for the Bachelor's degree, but has confirmed in the state the right to award that degree. It has limited the learned professions and the civil service to candidates prepared in accordance with the *lycée* courses and successful in *lycée* examinations. Moreover, it has won recognition of the need of further reforms in secondary education and has emphasised certain dangers attendant upon reforms already made. Complete each in itself without a sense of unity with other schools, the *lycées* are still in large measure class schools. The cost of text-books, tuition, and lodging practically debar the masses from attendance, even if the non-connection of its courses of studies with those of the primary schools did not make admission impossible. The tardy and imperfect recognition of the practical needs of the new democracy has projected into the domain of secondary education the superior primary school. This school fulfils a function which sooner or later the regular secondary school must fulfil. Above all, the desire to protect the state schools has brought recognition of the need of the kindly human interests and sympathies so marked in the school life of the Orders and so foreign to the military strictness and scholarly exclusiveness of the state institution.

Reforms already made have emphasised two dangers. In popularising the courses of study the state has weakened them, with the result that the higher

Special schools now assume some of the branches hitherto taught in the *lycées*. Since 1893 candidates for admission to the study of medicine have been required to present the Bachelor's degree in letters and science, together with a special certificate in science from the science faculty of the academy. Since 1895 law schools have organised courses which include several branches that belong properly to the secondary schools. This tendency to transfer general training in letters and science to special schools, together with the growth in local autonomy, lowers the significance and the prestige of the Bachelor's course and diploma. A second danger arises from the particular form which decentralisation assumes in France. Local authority increases, but it is the authority of the professional man—the teacher and the officer of the University. Such decentralisation is not always the safest.

Superior Education.—Although the Revolution of 1789, deeming the ideas and influences of the twenty-one universities of the Old Monarchy to be hostile to progress, dissolved them, the Revolution was not opposed to higher education. Mirabeau, Talleyrand, and Condorcet advocated the creation of “universal” schools “to search all truth and all science” and to their advocacy is due the preservation of the *Collège de France* and of the Museum of Natural History, as well as the organisation in later years of the Institute of France. Poverty, and the need of a trained corps of civil servants, not hostility, turned the Revolution's energies for the moment away from the universities towards the creation of such special training schools as the Polytechnique, *École Normale*, schools of law, medicine, etc. Later, as we have seen, Napoleon reorganised the university as a great civil corporation with an administering, ex-

aming and diploma-granting, not a teaching, authority, and such it remained practically throughout the Restoration and Second Empire. Faint signs of a movement towards the development of teaching universities appear in the lecture-courses of the school of medicine at Paris organised as early as 1823, in corresponding courses in the school of law organised in 1838, and in the public lectures of Guizot, Villain, and Cousin in the faculties of letters and science at Paris during the Restoration period. This movement was emphasised by state papers by Cousin and Duruy, and above all in the report of Guizot's special commission issued just prior to 1870.

This report is particularly important as it foreshadowed the reforms in superior education of the last thirty years of the century. It demanded a unification of the faculties, a decrease in their numbers by the dissolution of the weaker amongst them, and the establishment of an effective teaching organisation, none of which changes, however, must work to the injury of the great Special schools. Reforms begun in 1875 reached their natural issue in the great laws of 1896. The process of development was slow, as time was needed to convince statesmen that reforms in superior education were as necessary to the welfare of France as reforms in primary education. But, while slow, the process was effective. At no period was the demand for reform outstripped by the law that enacted that reform. Gradually and without violence the scholars and statesmen of the country fought their way against the clerical party, the vested interests of petty faculties, and the fears of the great Special schools.

The first reform was retrogressive. The law of 1875, representative of the clerical tendencies of the National Assembly, cancelled the civil authority of

the university and gave freedom to all persons or associations to organise private faculties and to teach. The same year, however, marked a progressive change in the national disposition towards the maintenance of the faculties. The state acknowledged its own responsibility by special grants for buildings, libraries, laboratories, etc. Further progress was made in the law of 1877 which carefully classified the staffs of the faculties and defined the method of appointment of professors by the President on the advice of the Minister. In 1879 and 1880, in a strong anti-clerical reaction the state restored to the university its monopoly of degree-granting privileges and cancelled the church's right of representation on the great examination commissions. In 1885, it went so far as to withdraw its customary grant to faculties in catholic theology.

The period between 1875 and 1887 brought into clearer light the Republic's intention to unify and organise the faculties into *teaching* universities. It encouraged the cities to create lecture courses, equip laboratories, and develop a strong local pride in the faculties in their midst. In thus giving form and purpose to the teaching functions of the faculties it made prominent the professional factor in university life. It enlarged the number of branches of study, it classified and defined the duties of the lecturer, and increased the number of enrolled students in the faculties of science and letters from none in 1876 to 2,358 in 1887.

The great struggle of the university for autonomy began in earnest with the modern movement towards decentralisation. In 1885 the old civil right to hold property, to accept endowments, to create new professorships was given back to the university. To control its revenues and distribute them among the fac-

ulties each academy was given a General Council. In this council sat the rector, the deans of the faculties, and representatives from each faculty. While the authority of this Council was largely financial, the same year (1886) saw its jurisdiction extended to matters of general administration and discipline, to the co-ordination of the studies of the various faculties, and to the offer of advice in the formation of lecture programmes, and in the appointment of professors. Beneath this General Council sat the council of the professors in a faculty, who took cognisance of the financial condition of the faculty and suggested names for the deanships. Purely scholastic matters were decided by the council of the staff. In 1889 a special budget was assigned by the state to the faculties and the amount due each academy was paid over to the General Council for distribution among the various faculties.

In 1893 a Finance Act formed the faculties in each centre into one body for financial purposes and gave to that body civil rights and a distinct budget. The great law of 1896 completed the reforms advocated by Guizot's report. The name of university was now definitely attached to each of fifteen groups of faculties, however incomplete that group might be. The General Council of the faculties was now converted into the Council of the University with oversight of the discipline, the property, administration, and the lecture-programmes in general. The financial status of each university was reorganised. Hitherto the revenues of the faculties had come from gifts by wealthy friends, bequests, official grants from departments or communes or the state, examination and tuition fees, library and laboratory fees. These revenues were collected and distributed by the state. By the new bill the state still makes all appointments (ou

the advice of the University Council, however), still makes annual appropriations, still conducts the state examinations for diplomas, and still collects the examination fees. But all other fees or gifts or local revenues are controlled by the University Council and used for the improvement of buildings and equipment.

In French universities lectures are of two classes, public for any person of either sex, special (or conferences) for the regular student. A student may seek a general education, or, if he hold the Bachelor's standing from a secondary school, pursue the course for a Master's or Doctor's degree. In recent years electives have become slightly more prominent in the university courses, and the higher degrees depend more and more upon the thesis. In very recent years the University Council has been permitted to give special degrees to foreigners and to excuse such foreigners from the regulations as to Bachelor's standing.

Several problems press for solution in superior education in France. The co-ordinating and correlating of the various subjects and courses in the different faculties of each university is not yet complete. Nor is the struggle to free the professor from state control yet over. In theory the professor is free to speak, think, and work, provided that whatever else he do he prepare such of his candidates as so request for the state's examinations. But in practice he is not free, electives are not very numerous, and the state's courses are very rigid. Moreover, the theoretical still dominates the practical and experimental in the class-room, and the class-room itself is too frequently a lecture-room, too rarely a laboratory. Finally the smaller universities must abandon the effort to maintain all the faculties or all the branches

and must specialise, giving prominence to local needs. With specialisation the technical school must assert its position alongside of the universal school.

The Revolution overthrew the old governing aristocracy, and, to train a new governing class, created a series of Special schools. The centralising tendency imparted to French government by the great Napoleon has brought within the purview of the state, schools and educational problems that in Saxon countries have been left to the initiative of the individual. The intellectual activity of the Frenchman, his highly organised system of government, the pressing needs of French industrialism, these are some of the forces that lie back of France's unequalled series of Special schools. France trains schoolmasters in the primary and normal schools; her superintendents of public works in schools of mines, bridges, roads, and architecture; her soldiers and sailors in polytechnical schools, in naval, cavalry, infantry and artillery schools; her captains of industry in schools of physics, chemistry, electricity; trades and fishery schools; and of commerce and arts. She maintains schools of agriculture, forestry schools, colonial schools, mechanics' schools, and in the number and character of her *Écoles des Hautes Études* is without a peer among the nations of the world.

CHAPTER VII.

SWITZERLAND.

SIXTEEN thousand square miles of mountains and valleys, a land without mines or harbours or navigable streams; three and one-quarter millions of people of divers origins, tongues, creeds, and political ideals; "a union that is not a unity, and a nation that is but a congeries of races"—this is Switzerland, and this is the home of educational systems, in comprehensiveness and precision scarcely inferior to that of Prussia itself. Education is the greatest force in Switzerland. War, trade, colonisation, a political reform may preoccupy other nations in Europe and dip deepest into their treasures, but the first interest of the Swiss is education. It bulks largest in their legislation and demands their greatest sacrifices.

Swiss systems of education bear unmistakable evidences of their origin. The federal authority, though slowly expanding, is still extremely limited, and the cantonal authority, like the cantonal patriotism, is practically paramount. Public instruction, taking its beginnings in the commune, has become the highest duty of the canton. It touches the federal jurisdiction only in the most unimportant details. Swiss accessibility to European movements and Swiss neutrality in European crises have left their marks upon Swiss ideas. While Swiss education has given its lessons ungrudgingly to the nations of the world, it has not hesitated to borrow

liberally in return. The manifoldness of its races and creeds, and their rivalries, have given manifoldness to its systems, but have purified those systems of all that is cumbrous, obsolete and intolerant. Finally, Swiss sanity has rejected what is visionary in the plans of her great reformers, Pestalozzi, Fellenberg, and Girard, and has evolved systems that are practical, comprehensive, appropriate to the agricultural and commercial limitations of the country, and, what is scarcely less important at the beginning of the twentieth century, singularly economical.

The mediæval church gave to Switzerland as to the rest of Europe, a few cathedral and parish schools. The trade-guilds added the burgher schools with their training in the vernacular. Not the least of the indirect results of the Reformation was the rapid development of the brotherhood and conventual schools of the Roman Catholic church and of the parish schools of the Protestants. To the zeal of the Protestants for instruction in the bible and the catechism, are further due, not only the institution of academies under great Protestant theologians, and the extension in some sort of secondary education to the rural districts, but chiefly the evolution and persistence of the idea of popular elementary instruction and the definite efforts of leaders like Zwingli to organise such instruction.

But the idea was born before its time and the efforts were too isolated. Popular education made little progress in Switzerland between the Thirty Years' War and the middle of the eighteenth century. The tide turned about 1760. The Helvetic Society (1762) gave an immense impetus to political and social reform. Before the end of the century Aargau and Berne decreed compulsory instruction and Zurich had actually laid the foundations of popular edu-

cation. Before the general acceptance of a free and compulsory primary instruction was possible it only remained for the Revolution to convince the world that education was not so much a privilege of church or philanthropy as a duty of the state and to show the world how new methods of taxation could meet the new demands of universal instruction.

The Swiss Constitution of 1798 which established on the French model the "one and indivisible Swiss republic" asserted the need of popular instruction and provided for the appointment of a Minister of Arts and Sciences. The first Minister, Stapfer—one of the great names in the educational history of Switzerland—at once ordered an inquiry into existing educational conditions. On the basis of this inquiry the Minister formulated a plan for popular instruction, including primary schools in the communes, school commissions for the cantons, and trained teachers and inspectors. But in the disturbed condition of the country reform was impossible, and apart from the aid given to Pestalozzi at Stanz and the founding of elementary schools in Luzerne, Stapfer's plan for the moment failed.

Political changes emphasised this failure. The "one and indivisible republic" of 1798 was repugnant to Swiss conceptions of cantonal autonomy and the five years of its existence were marked by numberless revolutions and *coups d'état*. Napoleon interfered in 1803 and in the Mediation Act established a happy balance between the cantonal and federal jurisdictions. Education was again committed to the cantons and the federal Department of Arts and Sciences was abolished.

But ultimately Stapfer won in the new spirit his energy imparted to educational movements. The cantons gave loyal assistance to Pestalozzi at Yver-

dun, Fellenberg at Hofwyl, and Girard at Freiburg. Protestant pastors in large centres took up the task of training teachers. The Swiss Educational Association was formed in 1808. Many towns established middle-class schools, the cantonal capitals organised Institutes of Art and Letters, Aargau opened a new gymnasium and, step by step, the foremost cantons introduced the graded-school system.

To destroy all hopes of a united and aggressive Switzerland the Congress of Vienna (1815) increased still further the powers of the cantons at the expense of the republic. At the same time, to repress liberal movements, it handed over the governments of these cantons to aristocratic oligarchies and indirectly restored to the church its old authority in education. Under these conditions the educational progress of the next fifteen years, apart from the introduction of the Bell-Lancaster methods of instruction, the growth in normal schools, and the evolution of primary schools in Midwalden, Luzerne, and Zurich, was inconsiderable.

The French Revolution of 1830 brought social and political upheavals to every country in Europe. In Switzerland it overthrew the aristocratic oligarchies of the cantons and organised a new federation on American models.

The new constitution laid upon the cantons the supreme duty of popular instruction and the next two decades show how nobly they responded to the duty. All cantons organised primary schools or reformed the organisation of primary schools already in existence. Improvements in the equipment and apparatus of these schools went hand in hand with improvements in methods, in the disappearance of the pupil-teacher and of mutual instruction, and with the improvement in the teachers in the development

of such training-schools as Berne, Zurich, Thurgau, and Vaud. Primary schools everywhere were open to rich and poor, burgher and peasant alike, and in the French cantons they were already secular and "compulsory." These years brought into relief, moreover, the application of the greatest principle in the educational practice of Switzerland. Popular education, however diverse in methods and institutions, is an organism; and all schools, high and low, must correlate and combine as parts of this organism. Secondary schools, in some cases gymnasia, were now established in the various cantons, in close affiliation with the primary schools. Allied to both primary and secondary schools and at the head of the school systems of their respective cantons were the universities founded at Zurich in 1833 and at Berne in 1834. One feature of this constructive period in Swiss education must not be overlooked. The republic had produced great educational thinkers, but in the hour of action, she rejected the philosopher and the theorist for the practical administrator. Swiss education of the nineteenth century owes immeasurably more to the organising genius of the German Schcer who gave Zurich her national system than to the educational philosophies of Pestalozzi, Fellenberg, and Girard combined.

The new constitution of 1848, while confirming the cantons in their control of education, permitted the central government to organise a federal polytechnic and a university. In 1854 the polytechnic was instituted at Zurich but cantonal jealousy of the state's interference has as yet forbidden the creation of the federal university.

After 1850 progress continued apace. Matthew Arnold declared in 1865 that the schools of Vaud, Neuchatel and Geneva were the best in the world.

Taking Zurich as a typical canton he found Swiss school attendance between the ages of 8 and 16 to be regular, free, compulsory, and universal. School accommodation was sufficient, teachers were well-trained, and all school organisations were democratic and anti-clerical. The machinery of school government included local committees, inspectors, and cantonal boards of public instruction. The school system itself embraced primary schools for children between six and twelve years of age, followed by such communal schools as the Finishing Schools, Singing Schools, Intermediate Schools, any one of which the graduate of a primary school might enter, and by such cantonal schools as the gymnasium and the school of industry. Between communal and cantonal schools the co-ordination was already singularly complete.

The Constitution of 1874 in defining the authority of the central government with respect to the treasury, the courts, and the army, declared it to be the duty of each canton to provide a free, obligatory, and non-sectarian elementary instruction, and the duty of the central government to enforce the obligation. Under a clause of the new constitution which permitted the central authorities to aid institutions for higher or university education, the confederation maintains, but not always administers, not only the famous polytechnic at Zurich already mentioned, but also museums created by an Act of 1876, industrial and agricultural schools created in 1884, commercial schools created in 1889 and the more recently organised classes in military drill and domestic science. This centralising tendency in the gradual extension of the authority of the confederation over the cantons has become evident more recently in the state's examination for army recruits, in its laws

against the employment of children under fourteen years of age and in its grants to classes in physical culture.

Apart from this centralising movement, Swiss education during the last twenty-five years has developed along lines laid down in the early part of the century. Educational institutions have increased in number and variety. Attendance, accommodation, apparatus, and equipment have improved rapidly. School curricula, teachers, and methods have changed completely. Throughout all changes the supreme authority in education has remained with the commune and the canton, the former to spend, and to administer in details, the latter to aid and, indirectly through that aid, to control in broad outlines.

The cantonal authority may be wielded as in Uri by an educational council chosen by the canton, or directly, as in Berne, by a member of the cantonal cabinet or executive, or less directly, as in the majority of the cantons, by a permanent board under the cantonal executive. Under the chief cantonal authority the educational machinery is exceedingly varied. In Berne, as typical of a centralised class, teachers and inspectors in Synod assembled exercise a direct and effective influence upon both cantonal and communal education. In immediate control of the primary education of the commune stands the communal school board, appointed by the communal council. Above this, several communes may combine and create, with the assistance of the cantonal authorities, a commission to control higher grade schools. For secondary schools, which are generally cantonal, the cantonal government creates a special commission. In Zurich, as typical of the decentralised class, the teachers are directly represented in the cantonal educational council and in the school commis-

sions of the districts. Not only is the cantonal educational authority thus to some extent independent of the cantonal Council of State, but the school commissions of the communes, and the commissions of the districts, which organise and direct the primary and higher grade schools, respectively, are elective and to that extent outside the jurisdiction of other communal and cantonal bodies. In the presence of the ineffective supervision and irregular organisation of this decentralised class, the movement towards centralisation grows yearly more marked.

Swiss methods of maintaining schools are scarcely less varied than Swiss methods of administering them. In general this school maintenance involves two principles. The geographical area served must maintain education out of the public purse of that area. The amount of the grants for maintenance must be determined not by the certificates of the teachers, or by the number and success of the pupils, but by the needs of the district and the purpose of the schools.

Where education is of national significance, and most expensive because most rapidly developing,—in higher technical, professional, or commercial work,—the confederation meets all expenditures. Each canton possesses one of each type of higher secondary school, gymnasium, realgymnasium, higher commercial school, and higher real-school, and aided sometimes by the urban centre interested, the canton alone maintains these schools. Aided more regularly and more generously by the localities concerned, the canton also maintains lower Technical Schools, Technical Institutes of college rank, Trade Schools, and Agricultural Institutes. Moreover, despite the fact that the nucleus of effort in primary and higher grade education rests naturally with the communes,

compulsory education has of recent years drawn the cantons more and more closely to the side of the municipalities and to-day from highly centralised Geneva, with its seventy-four per cent., to Schwyz with its six per cent., the cantonal grants amount to thirty-three per cent. of the total expenditure on primary education in Switzerland. And these cantonal grants, it may be added, are not based upon the subjects, examinations, or attendance, but bear an absolute proportion to the needs of the commune and its total expenditure for education, and are appropriated solely to the teachers' salaries.

In Switzerland, as in the United States, but not as elsewhere in Europe, the nucleus of authority in education is the commune; the state acts only in the sphere delegated to it by the commune. In fact the local public controls education, and pays for it by direct taxation. But control and payment are divided. Communal school commissions control, but the ordinary communal councils decide upon the appropriations for maintenance. In thus preserving to the ratepayers an immediate control over the school tax, the Swiss systems claim to maintain a due proportion in expenditure between schools and schools and between schools and other municipal interests, and to repress the unfortunate tendency to regard education as an "extra-expenditure." The practical results are interesting. The Swiss people have lost none of their interest in education. They maintain school systems the most comprehensive, and at the same time the least expensive, in Europe, and, compared with England's appropriation of ninety per cent. of the total state grant for primary instruction and practically nothing for secondary instruction, their appropriation of fifty-eight per cent. of the total for primary instruction, thirteen per cent. for ad-

vanced primary, ten per cent. for secondary, and nine per cent. for technical instruction seems singularly sane and well-balanced.

Teachers.—The majority of the forty-two Training Colleges in Switzerland (twenty-three are for male students only) owe their existence to movements resulting from the overthrow of the cantonal oligarchies in 1830–1. Apart from the few conducted by the communes and private associations, these colleges are controlled and maintained by the cantons. In the main they are devoted to the training of teachers, but a growing minority combine that training with a regular secondary course of study. Indeed, it is increasingly felt that professional training should not begin too early and should not be separated from the regular departments of academic instruction. This feeling reflects itself in the Swiss disregard for the so-called professional subjects of pedagogy, psychology, etc. Candidates for admission to these Training Colleges are fifteen to eighteen years of age, must be possessed of good characters and good physiques, and must pass the regular admission examination. The courses of instruction in the colleges include considerable mathematics and science, modern languages, history and geography, drawing and gymnastics, a little practice in teaching and less of the science of education. Special examinations mark the graduation ceremonies.

Elementary and higher grade teachers are trained in these colleges, but the latter are subjected to special tests prior to appointment. Apart from partial courses in pedagogy in the universities of Berne and Basle, Switzerland gives no professional training for teachers in secondary schools. Special courses of training are provided by the cantons for teachers of music, natural science, manual training, etc.

Elementary teachers are appointed by local school commissions for from one to eight years. Supervision is very unsatisfactory and dismissals are far too rare. Vacancies in higher schools are advertised and applicants are specially examined. In general teachers' salaries are fixed by law as to the minimum. Steady employment, orphan funds, pensions, such perquisites as house, garden, and firewood relieve the comparative insignificance of Swiss salaries.

Schools.—It is difficult to classify the schools of Switzerland. Infant schools with a distinctly Froebelian purpose are common to most of the cantons. These are free, optional, to a large extent urban, and open to children four years of age. Generally at six years of age the Swiss child enters the primary school and whether this school be public, as is almost universal, or private, the instruction is gratuitous, unsectarian, obligatory, and subject to the public's supervision. At ten or twelve years of age, and for periods that vary with the schools concerned, the child next enters a District School, that is, a higher, primary or modern school (with or without Latin and French), or a Continuation School with its commercial and mathematical branches for apprentices, or a secondary school.

This secondary school is either a cantonal school, somewhat after the order of the American High School, but with the sexes generally separated, or a gymnasium (with preparatory classes) of the German type. Both cantonal school and gymnasium present general courses in the classical humanities, followed by alternative courses in *real* and linguistic branches. Other institutions, of the secondary type which receive students from the primary schools or from the lower classes of the high schools and gym-

nasia, are the Commercial Schools, Technical Schools and Institutes, Agricultural Schools, such as those at Zurich and Berne, and the Schools of Arts and Trades, such as those at Zurich, Luzerne, Basle, St. Gall and Geneva.

Graduates of the Commercial and Technical Schools and many scholars from the various countries of Europe, receive superior training in the magnificent Polytechnic at Zurich. In applied science and mathematics, in mechanics, architecture, engineering, agriculture, pharmacy, etc., this institute represents the highest standard of work on the Continent. Five universities, Basle (1460), Zurich (1833), Berne (1834), Geneva (1878), and Lausanne (1891), with two academies of university rank, Freiburg and Neufchatel, receive and train the graduates of the gymnasia. These universities are organised on the German model with rectors and senate, and with the four faculties of law, medicine, theology, and philosophy.

CHAPTER VIII.

SWEDEN AND NORWAY.

AT a date which archæologists have placed approximately fifteen centuries before the Christian era, there began a swarming-out, as it were, of various tribes from the parent Aryan hive in Central Asia. Among the last to leave were the German and Scandinavian tribes, who began at almost, if not quite, the same time their northward march through Europe, and were, to say the least, very near of kin. Somewhere about the second century B.C., the Svear (Swedes), the Daner (Danes), and the future Norwegians came together to their new abode, driving before them into the far north the Finns and the Lapps. But before their history began to be recorded they existed as separate nations, within almost their present boundaries.

Norway lies between fifty-eight and seventy-one degrees north latitude, thus extending within the Arctic circle, but the warm waters of the Gulf Stream running far up into the land through the long fiords, serve to moderate the severity of the climate. The bold cliffs and rocky headlands on the coast are but the seaward ends of the mountain chains, which broaden out in some places into plateaus, and at others present a rugged mass of peak and glacier. Dense forests cover the slopes, inter-

spersed with mountain lakes and little patches of arable land. While the grain-producing area is only about seven per cent., the industrious people have made agriculture one of the chief resources. The presence of fishing, timber, and mining industries, necessitates means of export. The geographical and physical conditions of the country make shipping very important to both the economic and social well-being of its inhabitants. These causes, added to the inherited sea-rover's disposition, have built for Norway one of the largest commercial navies in the world.

The Scandinavian tribes, warlike at once by nature and habit, after generations of wandering and fighting on their northward journey, were for many generations little inclined to become peaceful tillers of the soil. They became the sea-rovers, the Vikings, pirates who preyed not only upon the adjacent shores, but penetrated even into the Mediterranean. Their earlier history, though wrapped in some degree of obscurity, seems to have been an unvarying story of struggle and bloodshed, both at home and abroad. But these savage times were not without their poetry, and the minstrel's glorification of the deeds of the Vikings gave to the world one of its greatest epics, the Norse Edda.

In the fourteenth century the Black Death devastated the peninsula, to be followed not long after by another and more enduring scourge, namely, the overlordship of Denmark. And here the history of Norway practically ends until the revival in the nineteenth century. Sweden, however, shortly regained her independence, and through the following centuries won fame, as well by the industry and intelligence of her people, as by the costly victories of Gustavus Adolphus and Charles XII.

SWEDEN.

Although the introduction of Christianity in the eleventh century was followed by some little instruction, in religious matters chiefly, by mendicant friars and in cloister schools, reading and writing were nowhere taught, and popular education, in its present sense, did not begin before the Reformation. The first Swedish school law—that of 1571—gave “to each school a master” with “hearers” to aid him if the pupils were too many. Then, in the seventeenth century, Church and State joined forces in establishing national education. Gustavus Adolphus founded the first gymnasium. His daughter, Queen Christina, decreed the establishment of a school, or “pedagogic,” in all her cities. The Church enjoined upon each rector the care of the education of the children in his district; and when, in 1686, an ecclesiastical decree refused marriage to those who could not repeat Luther’s Catechism, the peasants themselves set about procuring schools. Their poverty forbade a regularly organised school; so the “master,” often a very incompetent person, journeyed about from one neighbourhood to another, and collecting the children in some farmhouse, taught them the primer, the catechism, and a little singing.

Various efforts were subsequently made to improve the character of these schools, and to establish stationary schools in the rural districts, but progress was extremely slow.

In the towns, however, the condition of education was much better. The burgher schools or “writing classes” practically placed instruction of some sort within reach of the humbler classes, while a higher education was offered in the gymnasia. But these schools were all private property; that is to say,

they were owned and controlled by municipalities or private persons, hence there was no regularly organised system, and each school chose its own course. Such were the conditions at the beginning of the nineteenth century.

Always democratic, and with a national life independent of the rest of Europe, Sweden suffered few social or political changes as a result of the Revolution. Bernadotte, one of Napoleon's generals, came into peaceful possession of the Swedish crown, and proved himself a loyal monarch. The union with Norway, a union only in name, while accentuating the old-time jealousy between the two countries, left Sweden as before. But the real influence of the Revolution, or rather, not of the Revolution itself, but of the great forces which had incidentally brought about that crisis, became apparent in the awakening intellectual life. In proof of this, let it suffice here to say that in these years are found the beginnings of a national education in Sweden.

The National or Elementary Schools (Volksskolar).
—So great was the preoccupation of the country during the early years of the century, that the first earnest effort for school reform came in 1820, when the consistory and clergy were ordered to inquire into the fitness of each teacher, moral as well as mental. This was followed four years later by the introduction of the Lancastrian, or monitorial, system of teaching, which was then very popular in England. It was an economical method, for as many as a thousand children could be taught by one master, by means of his pupil-teachers, or monitors, and there was great show of progress. But the apparent effectiveness of the system was due to the method of rote-learning, which, while making good showing at the moment, served but ill the real purpose of edu-

cation, while the weak discipline and inadequate instruction of the child-teacher were supplemented by an elaborate system of rewards. Moreover, the difficulty of providing teachers possessing the exceptional ability and training required in the headmaster of a school of this sort, ensured the ultimate failure of the system.

Up to this time there had been no provision for the training of teachers, no standard of qualification. In 1824, however, two normal schools were established, but the improvement in the elementary schools, which should have resulted, was greatly lessened by the irregular attendance of the children. As a matter of fact, the state had no control over the schools, for they were private institutions, in the sense of being supported by the parents of the scholars, and the parents exercised their own option in sending their children regularly to school.

As yet Sweden had been able to arrive at no satisfactory solution of the problem of educating her people. But during the years of dissatisfaction and discussion, which followed the awakening of her concern in this matter, the needs of the communities were being more clearly understood, and slowly a scheme was evolved to meet these needs. The result was a measure which completely reorganised the school system, if such it could then be called, and which, with some later modifications, is in operation at the present day.

This law of 1842 laid down the principle that each parish or district should have its school, and each school a regularly qualified teacher. The schools were to be stationary wherever the nature of the country would permit, and it was the intention of the framers of the law that, as the country grew in wealth and population, and the wild lands were more

and more reclaimed, the ambulatory school should be replaced by the fixed school. In the poor and sparsely settled sections of the country, two or more parishes were allowed to unite in maintaining a school, on condition, however, that as soon as practicable each should provide a distinct school for itself.

To provide training for the teachers a Normal school was to be established in the chief town of each diocese.

In addition to these there was to be a lower elementary grade, which in rural districts was usually migratory, where little children were taught, so that they might have some little start when they were able to attend the parish school.

Another clause made compulsory the attendance of children between nine and fourteen years of age, and a list was kept in each parish, wherein were enrolled the names of all children of seven years and upwards.

The support of the schools was provided for in three ways—a general school tax, a local levy on each taxpayer for himself and household, and state aid.

The affairs of each school were to be in the hands of a local board, who reported to the bishop and consistory of the diocese, and these, in turn, were responsible to the ministry and the king.

The year 1848 was marked by the accession of Oscar I., the second of the Bernadotte family. He was popular in both Sweden and Norway, thoroughly conversant with all domestic questions, and, while he took no part in foreign politics, he was always on the alert to gather from abroad what might tend to the advancement of his people. During the peaceful years of his reign, Sweden kept pace with the general progress of Europe, mechanical and social. The introduction of railways and tele-

graphs, no less than the civil and military reforms, gave a new impulse to the commercial and social life of the nation. This progressive policy was continued by the next king, Charles XV., in whose reign came the great constitutional change of 1866, when the four chambers representing the nobles, the clergy, the burghers, and the peasants, which had met thus from ancient times, were reduced to two chambers, after the English plan.

When in 1842 the new educational system had been organised, various avenues had been mapped out for its development. Its history, during the two decades following its inception, consists in the realisation of the aims of those who framed it. The material progress of the country led to a steady increase in the number of fixed schools, as well as in the value of their buildings and equipment. The systematic training of teachers was bringing about a uniformity both in method and matter of instruction, while a more complete centralisation was effected by the introduction, in 1861, of a system of state inspection.

The year 1858 was marked by an extension of the elementary school course, both downwards and upwards. The infant schools, or *Smaskolar*, in some sense a reorganisation of the migratory preparatory classes, were given legally qualified teachers, and a regularly prescribed course, which led up to the lower grades of the elementary schools, or *Volksskolar*. And on the other hand there were established the higher elementary schools, which had the nature of continuation classes, and are not to be confused with the Peasants' and People's High schools. They were adapted specially to agricultural districts and were so arranged that men could attend during the winter and women during the summer. To both

Smaskolar and higher *Volksskolar* the state gave substantial aid.

The Peasants' and People's High schools grew out of "a distinct regulation of 1862," says a report, "and a parliamentary decree of 1866, which aimed to inculcate knowledge of the history of the fatherland, and to so train the children of the peasant class, that they would feel special interest in the problems of citizenship." The pupils were required to have passed through the elementary schools, and to be at least sixteen (for girls) and eighteen (for boys) years of age.

The two features of the Swedish educational system, which to Americans are perhaps of most interest, are manual training, or *Sloyd*, and Swedish gymnastics.

To Sweden is due the credit of having originated the system of manual training in elementary schools, not on its purely utilitarian side, for France and Germany early in the century had their schools for training artisans, but as a factor in the pupil's mental training in the same measure as arithmetic is such, or history. The *Sloyd* idea is by no means a new one, for it may be traced even in Luther's writings. Comenius, who lived during the Thirty Years' War, and who was one of the earliest writers on the science of pedagogy, lays much stress upon the value of manual work in education, while the judicious directing of childish activity into useful channels is the key-note of Froebel's system. In Sweden the first advocate of *Sloyd* was Forsten Rudenschold (1798-1859), who, in his work, as well as in his writings, insisted upon the value of the practical in the school course, not only to provide against the boy's future, but to supply a useful and interesting substitute for gymnastics, a substitute which,

while training the body, would at the same time train the mind. Swedish statesmen and private persons, as well as educationists, were interested in the matter, and at length in 1870 Sloyd was first taught in an elementary school. In 1876 it was introduced into the schools of Stockholm, and in the same year a small Sloyd Normal school was established. But all this was due to private enterprise. The first state recognition came in 1877, when a grant amounting to \$21.00 was given to each school where Sloyd was taught. In 1887 Sloyd was made part of the course in three of the public Normal schools, and the number of schools in which it was taught reached almost twelve hundred. And in the meantime, whatever utilitarian purpose there had been in the introduction of manual training was gradually, but surely, being superseded by a distinctly educational aim. Naturally this change was first apparent in the Naas training school, the so-called fountain-head of the Swedish Sloyd system.

This school at Naas was founded in 1875 by private generosity for the training of Sloyd teachers, and in connection with it is a practice school, which is a model of its kind. Of recent years the academic and theoretical factors in the teacher's course have been eliminated, and the practical side has developed proportionately. The Normal training consists of lectures and discussions concerning the methods, system and history of educational Sloyd, together with the making of a series of models.

The practice of Sloyd includes iron-working, wood-carving, cardboard work, etc., as well as carpentry exercises, but the "Naas method," which is by far the best known and most widely followed both in Europe and America, is that particular method which adopts the *exercises* of carpentry Sloyd as a

basis for the educational manual Sloyd. Wood-working is considered to be productive of best results in that it combines most of the advantages of other branches of Sloyd, uniting with harmonious physical development, moral development through love and respect for work and mental training in precision, neatness and idea of form.

The scope of the Naas Normal course has widened to include three courses, or series of exercises—"The Fundamental Series for Country Elementary Schools," "The Town Elementary Series for Boys," and "The Higher Boys' School Series"—so that the teacher-in-training may work through whichever is best fitted for the school in which he intends to teach.

Nor are the girls neglected. In the girls' practice school in connection with the Naas institute, *Husslöjd* is given an æsthetic, as well as practical direction in the progressive arrangement of exercises in sewing, knitting, and dressmaking.

Teachers of Sloyd co-operate with teachers of gymnastics in making each course the complement of the other, an object greatly facilitated by the easy, perfectly graded system of gymnastics.

Swedish gymnastics, as they are known both in Europe and America, were originated by Ling (1777-1839) who, in 1814, founded the Royal Central Gymnastic Institute. Through his own efforts and those of his followers, his ideas have been put into practice, not only in the Swedish schools, but also in military training and in medical treatment. The system is based upon a careful study of the human body, and aims by simple, natural movements, quite free from violence, and without the use of apparatus, to promote the symmetrical development of the body. The school course consists of carefully graded exercises adapted to pupils of dif-

ferent ages, the feeble and badly developed, as well as the normal child.

It has been said that Sweden is regarded as a sort of "experiment station" in the matters of manual training and school hygiene. In 1883-4 a government commission on educational affairs made an enquiry into the general health of school children. A result of this enquiry was the appointment of a school physician, whose duty it is to pay a monthly visit to each school and to report upon its hygienic condition and the health and growth of the children, as well as the condition of their eyes. He is to be consulted regarding the programme of studies, so as to guard against undue pressure. And it might be well to say in this connection that interest in the physical well-being of the boys and girls shows no sign of failing. During the last decade of the century, baths were established in connection with the city schools, where the children from poor homes are bathed regularly and scientifically. School kitchens were also established, where cooking is taught to the senior girls and meals provided for poor children.

The schools are furnished with the best systems of heating and ventilating—in Stockholm the air in each schoolroom is changed four times within an hour.

It would have been impossible within the allotted space to trace statute by statute the modifications of and additions to the fundamental law of 1842. So it has been thought best, after noting the more important of the new factors, to sum up the condition of the elementary schools at the end of the nineteenth century with regard to their government and means of support, their teachers and course of studies.

It has been seen how the first impulse toward popular education was due to the influence of the

Reformed Church, and how, from the earliest times, church and state combined in providing education; it is not strange, then, that in central, as well as local administration of the national school system, the church bears even now no insignificant part. Indeed, public worship and public instruction form one ministerial portfolio, so closely are their interests allied—a relation naturally impossible except in a country with a state church and little dissent.

The local board of each district has for its permanent chairman the chief clergyman, with at least four other members elected for four years. This board exercises control over the buildings, programme, and general discipline of the school, and makes an annual report thereon to the board of the diocese. The latter has general supervision over the schools in the diocese, reporting triennially to the king. In each diocese, also, there has been since 1861 an inspector appointed by the government, who reports to the local and diocesan boards from time to time on the needs of the schools. At the end of his five years' term of appointment he must give a complete review of the condition of the work in his district to the Minister, who in authority is next to the king.

There are special regulations with regard to the control of city schools. The city is divided into parishes, each having a local board, whose duty it is to watch over buildings and attendance, reporting to the central board. This central board consists of a member from each parish, together with the physician, a member of the consistory, and the city school inspector, and their duty is to generally supervise all school matters, to appoint teachers (the parish boards may recommend the candidates) and administer financial affairs. The state has always borne a part of the cost of the schools. In 1842 a

poor parish received help in paying the teacher's salary, but defrayed all other expenses. Since 1875, the state has paid two-thirds of the teacher's salary, and also assists poor communities by direct aid to poor families, and by supplying school material at a low cost.

Although the parish builds and owns its school buildings, these must comply with the regulations as to fitness. They must have a sufficient number of rooms, be well lighted and heated, and in short, be hygienically perfect. The length of the school term, and the length of the school day, as well as the general course of study, are regulated by the Minister of Education.

In the infant schools, or *Smaskolar*, the object is to teach the children the elements of reading, writing and arithmetic, and, of course, religion.

The pupils in the national schools proper, in addition to a more advanced course in reading, writing, arithmetic, and religion, study geometry, history, geography, with some form of Sloyd, and all children are taught singing.

The continuation schools are designed to give a year or two further instruction to those pupils who have passed through the national schools.

The teaching of religion has from the first held an important place in Swedish education, and is compulsory in all schools. But during the last decade of the century considerably less time has been allotted to it, and the character of the teaching is less dogmatic.

The practical character of Swedish education is at once evident in the fact that in the majority of the national schools the children are taught not only Sloyd, but also tree and flower culture, and, in maritime districts, even swimming.

It is necessary, too, that with the progress of the national schools, there should be a similar development in the history of their teaching force. The law of 1842, which gave to each parish its school and its legally qualified master, also decreed the master's salary. This was to be £22 annually, with eight barrels of corn *in natura*, the parish to give him in addition his fuel and lodging, fodder for his cow, and a garden plot, where he could grow vegetables for himself, and also teach his pupils the planting of trees. The qualifications required by the local board were often beyond the normal curriculum, for the teacher was (and in some rural districts is so still) sexton, choir leader, organist, and local physician of his parish.

While the increase in the salaries of teachers has not been too substantial, some compensation has been made by the organisation of a liberal system of pensions. But the real progress has been in the training received at the Normal schools. Beginning after 1842 with one in each diocese, with a short term of a few months, and inadequate training, the number of Normal schools diminished rapidly, until in 1870 there were but nine. At present there are twelve, seven for men and five for women, each in charge of a rector and his assistants, and under the supervision of the authorities of the diocese and the ministry of education. As these schools became fewer in number they increased in effectiveness, and since 1878 the course has extended over four years. The curriculum comprises non-professional, as well as professional, branches of study. In connection with each Normal school is a practice school, where the students-in-training begin actual teaching in their second year.

A new epoch in the history of Swedish teachers

began with the admission of women to the ranks. They began as teachers in the infant schools. In 1860 they were granted admission into the training schools, and two years later a training school for women was established with a girls' model school attached to it. At present the women teachers by far outnumber the men, and their work has been eminently successful.

Secondary Education.—American and Swedish secondary education are quite unlike each other. Secondary schools in Sweden do not correspond to our high schools, which form an intermediate grade between the common schools and the university. The Swedish schools receive the boy when about nine years of age, in order to train him for the university, or the higher technical schools. And, because they instruct in the "elements" of the sciences, are frequently called "*elementarskolar*" or "elementary schools."

From the time of their establishment by Gustavus Adolphus, the secondary schools, or gymnasia, received special attention and support from the crown, and also from the church under whose control they actually were. Very early in their history a division grew up between the distinctly classical course and the practical branch, the latter of which, called the "trivial" school from the mediæval "trivium," corresponds to the modern "real" school. There was also a third called the "burghers' school," a sort of higher people's school, where catechism, writing, Swedish and arithmetic were taught.

The tendency of the classical gymnasium, which had in its curriculum theology, church history, Hebrew and moral philosophy, was more and more in the direction of the church seminary, and the breach between it and the "trivial" or "real" schools

widened as the latter became more and more modern in character. A plan in the early years of the century, to give a general course to all three schools, was stubbornly opposed by the churchmen, with the actual result that some of the gymnasia became more rigidly classical, and the others were known as Apologist schools, a division which existed until 1845. In 1828 a compromise was effected which admitted certain optional branches, and allowed a less rigid system of grading. During these years, too, the Lancastrian system was in vogue in secondary, as well as elementary, schools, and with no more satisfactory results.

At length, after many experiments and much discussion, a royal decree was promulgated in 1849, which may be regarded as the starting-point of the present secondary system. The most important items were the union of the burgher and trivial schools, with a course combining features of both; and the transformation of the gymnasia into preparatory schools for the university and superior schools. While these measures gave impetus to the growth of these schools numerically, the extensive programme resulted in superficiality. Moreover, the popularity of the "trivial" studies, and the secularisation of the gymnasia, aroused the opposition of the consistory, who fought tooth and nail for the maintenance of classical studies. And the gain on the classical side is noticeable in all the minor reforms made before the still effective law of 1878. Popular opinion, however, was on the side of the "real" studies, and in 1882 a commission to enquire into secondary education made a report so hostile to classics that it overreached itself and effected nothing. The movement for the abolition of Latin as an obligatory subject has so far succeeded

that students who have been matriculated into the universities without Latin, are allowed to proceed to degrees in mathematics and natural science. Furthermore, it has been suggested to diminish the study of Latin and Greek in the gymnasia, and to organise a special department for them in the universities.

Another and recent suggestion is to make the secondary schools continuous with the elementary or national schools, after the American plan, by eliminating the lowest classes of the former and readjusting the course of study.

The government of the secondary schools is in the hands of a local board, at whose head is the bishop as ephorus of all the schools in his diocese. Above him is the ministry of public instruction, which has two divisions, one having charge of elementary education and the other of secondary, while the chief of this bureau acts as inspector-general of all secondary schools. With the King ultimately rests all authority, both legislative and executive. The public secondary schools ask only a small fee of the students, and cost the government in the neighbourhood of a million dollars annually.

These schools are classified as higher, or complete (with seven grades or classes), lower, or incomplete (with five or three classes), and the "pedagogier" (which resemble the lower grades of the former and have one or two classes). Formerly the complete schools corresponded to the classical schools and the incomplete to the "real" schools (of Germany). But the growth of the real element has made this distinction incorrect, for at least twenty schools are complete in the "Reallinie," as well as in the "Latinlinie." Though the various schools differ in the arrangement of classes, the general

plan is this: There is a nine years' course, one year in each of the five lower classes and two years in each of the higher classes. In the three lower grades instruction is the same for both Latin and Real courses, German being the only foreign language taught. Then, at the beginning of the fourth year, there is a bifurcation; but, except for the fact that the student chooses between Latin and English (which represents the modern, or Real, course), instruction is much the same in both branches for two years. During the last four years, however, these divisions are quite separate, and at the same time the Latin section itself divides into the purely classical with Greek, and the semi-classical with English.

At the end of the course there is a difficult "maturity" examination, which gives admission to the university and the higher technical and professional schools.

In addition to the public secondary schools there are several private institutions offering much the same course as the former and granting "maturity" certificates. Among the most important of these are the "Samskolar," or co-educational schools, whose chief aim is to give a practical education, laying particular stress upon modern languages and Sloyd. Many of these schools receive state aid.

Education of Girls.—In the rural districts and, generally speaking, in all elementary schools girls pursue the same course of studies as their brothers, often in the same classes. The continuation schools, the People's High Schools, and the Burgher schools (since 1881) are co-educational. But the public secondary schools are still closed to girls.

Until the early part of the nineteenth century the daughters of the wealthier classes were educated at home by governesses, or in private classes. The

course was confined to a little religious instruction, a little music, painting and fancy-work, a very little history, geography, and mathematics, and a very great deal of French, an ability to speak this language being the most highly esteemed of feminine accomplishments.

With the revival of general interest in educational matters early in the century, came the recognition of the need of public institutions for the instruction of girls, and this need was in some degree met by private generosity in the founding of the "Kjellberg" and "Bishop Wallin" schools. But this movement was seriously handicapped by the lack of efficiently trained female teachers. So in 1858 a number of learned men organised in Stockholm a class for the higher instruction of women. This incident, together with the demand for women teachers in the national schools at this time, led to the action of the government in founding in 1860 the Normal schools for women, and in 1861 a higher Normal school for training teachers for the higher schools for girls.

These higher schools now number between sixty and seventy, but with the single exception of the practice school connected with the women's higher Normal school, none receive aid from the government. They are founded either by endowment or by the municipalities, and depend mainly on their fees for support. Of late the tendency has been for these schools to become the charge of the municipality, or district, and possibly in time they will come under state control.

The Universities.—At the head of the school system stand the two state universities of Upsala, founded in 1477, and Lund, founded in 1668. Two other universities, at Stockholm and Gothenberg,

founded in the last quarter of the nineteenth century, are still supported by private funds, though they will eventually become part of the educational system of Sweden.

The old state universities resemble those of Germany in government, curriculum, and even in the presence of students' corps. They admit only those students who have passed the "maturity" examination of the secondary schools, and, after a course rarely shorter than six years, grant the degrees of "candidate," "licentiate," and "doctor." They are governed by a chancellor, a pro-chancellor and a board in affiliation with the ministry of public instruction. And they are an integral part of the educational system, not only because they are under state supervision and receive state aid, but also because the teachers in the higher state schools are required to be university graduates.

Other Schools.—There is a large number of schools which, while they do not fall into the foregoing classes of national and secondary schools and universities, still form part of the educational system, inasmuch as they receive state grants and are under state supervision. These are the schools for defective children, the technical schools and those which, for want of a comprehensive term, may be called "special" schools.

There are eighteen schools for the education of the deaf and dumb, four of which are state institutions; and in connection with one of these is a normal department for training teachers. Of recent years the instruction of deaf and dumb children has been obligatory.

There are three schools for the blind—a preparatory and a regular school where a liberal education is given, together with training in skilled handi-

work, also a manual training school for those who have become blind in later life.

There are twenty schools with specially trained teachers, where idiots receive all possible mental, physical, and moral training. There are asylums for those incapable of development.

The technical schools are an organisation quite distinct from the Sloyd training before referred to; the aim of the technical schools being to train for actual industrial work, while Sloyd has a purely pedagogic purpose.

In the Swedish system there are three grades of technical schools: the lowest technical school, the technical elementary school, and the technical high school. The lowest schools, which were established as early as 1852, are arranged to suit the convenience of working people, classes being held in the evenings and on Sunday afternoons. Their support is shared equally by the state and the municipality, and there is state inspection. The courses for men and women have in common, writing, Swedish, and drawing, while the women are instructed in sewing, modelling, etc., and the men in mechanics, building, etc. When possible this school is arranged so as to be preparatory to the technical elementary school.

Before entering the technical elementary school, the pupil must have passed through the national school, and have attained the age of fourteen. These schools, too, receive state subsidies and are subject to state inspection. Their course comprises, in addition to various industrial branches, Swedish, writing, and drawing, and is much more advanced than that of the lower schools. There are six special industrial schools, which seem to form a class by themselves between the technical elementary and the highest technical schools. These are the schools at Mal-

mo, Norkoping, Orebro, and Boras, the school for iron and steel workers, and, notably, the Chalmers Technical Institute (which was founded in 1811). These require a three years' course, the latter half of the time being devoted to special preparation for the career the student has chosen.

Among the technical high schools, the Polytechnic at Stockholm stands first. It has five departments, namely: chemistry, metallurgy, mechanical technology, architecture, and road and waterway construction. It is governed by a board appointed by the king.

The "special schools" comprise the schools of mining, agriculture, etc.

Besides the department of mining, the Polytechnic in Stockholm, there are two schools in the mining districts jointly supported by the state and the Ironmasters' Association.

To provide for the care of her extensive northern timber-lands, Sweden has given her forestry schools full share of attention. There is the chief school at Stockholm with a preparatory school at Omberg, and eight others for the training of rangers.

The state also supports agricultural and dairy colleges, and instruction in gardening is found on the normal school course, as well as in all the rural elementary schools.

The naval and military schools belong in a measure to the technical schools, for their training is largely of a scientific nature. There are ten schools of navigation and engineering, a ship-building institute, and the Royal Navy school, where the officers of the navy are trained.

Army officers are trained in the various staff colleges, riding and artillery schools, and for the study

of military science there is the Royal Military Academy at Stockholm, founded in 1796.

In addition to the faculty of medicine at the University, there is also a college of surgery in Stockholm. The colleges of pharmacy and dentistry have final examinations set by the Royal Medical Board.

NORWAY.

The history of the educational system of Sweden can be traced back to its beginnings in the Reformation. In Norway, on the other hand, Danish tyranny left little mental or spiritual life, and not only was the new religion slow in gaining ground, but the intellectual revival which accompanied it scarcely reached the people. The church, however, took the first step in the matter of education, for in instituting the rite of confirmation in 1736 (a rite indispensable to marriage) some degree of religious knowledge was insisted upon, following the Swedish precedent of fifty years before. Within five years the people had contrived for themselves some crude sort of school system, and thus matters stood until 1814, a date which may be said to mark the beginning of Norway's history, educational as well as constitutional.

By the treaty of Kiel in 1814, Denmark disposed of Norway to Sweden. But the Norwegian people, their ancient spirit of freedom roused by the stirring events of recent years, had no mind to be the despised dependency of Sweden, as they had for so long been of Denmark. Exhausted by the Napoleonic wars into which their connection with Denmark had dragged them, with government and finances in a seemingly hopeless condition, they nevertheless offered armed resistance to the efforts of Sweden to carry out the treaty. In the end they won from Swe-

den a charter which gave Norway her own constitution and a separate government.

With the promulgation of the charter began a period of peace and prosperity; population increased, commerce extended, and the House of Representatives, the *Storting*, feeling the national existence secure, began to take a deep interest in educational matters.

In a country as democratic as Norway, where indeed both the titles and the privileges of nobility were abolished in 1821, it is natural that the education of the people should be the first care of the state. And side by side with the national polity, literature, and art, there has grown up during the nineteenth century a distinctly national educational system. A recent Norwegian writer says of the last: "The development of the school has been in a decidedly democratic direction. From a school for the poor it has risen to a *national* school; from a church school, to a school in which general education is given, which ought to be common to all members of society."

The Norwegian educational system is not unlike the Swedish; nor is this strange, since the two peoples are of one race and similar in speech and customs. But just as in her political, so in her educational history we find Norway working out independently a system conformable to her own individual needs. Like those of Sweden, the schools are classified thus: the national or elementary schools, which are designed to place education within reach of every child; the secondary schools, which prepare for the university, for the special schools, and for practical life; the university; and the special schools.

Elementary Schools.—In the matter of elementary schools the material which the newly-constituted

Storthing had to begin upon was meagre indeed. Generally speaking, every community—a vague term—had its school, but the masters possessed no particular qualifications, and the scholars attended or not, as their parents pleased. In the country districts, just as in Sweden, the ambulatory school,—the outgrowth of physical and political conditions—was almost the only sort to be found. In the towns, however, there existed a more regular, effective and advanced school organisation, which had grown out of the “poor schools” of the preceding century. So distinct were these in character that, when, in 1827, the Storthing set about formulating the elementary school system, it was found necessary to give rural and urban schools distinct regulations.

With that practical thoroughness which marks Norwegian legislators, they at the same time provided at state expense a normal school in each of the six dioceses; for they recognised that in the training of the teacher lay the only effective means of reorganising the school system. And some years later, when legislation was again in progress regarding rural schools, lesser normal schools were established in connection with the elementary schools themselves.

The laws of 1848 and 1860, which dealt with urban and rural schools, respectively, were, with some subsequent modifications and additions, in force until 1889, and form the basis of the present system.

Before describing in particular the city and country schools, however, one must first understand the general organisation of the country, which serves for political and ecclesiastical as well as educational administration.

As in Sweden, church and state combine in the conduct of educational affairs. From the earliest

beginnings of education in Norway, and long after the state took it in hand in 1827, the leaders in school matters were the clergy. To their efforts is due a great measure of the progress. And while wielding so strong an influence, and even insisting upon the teaching of religion in the schools, the church has been in Norway the staunchest friend of secular education, and not, as in the Latin nations, its enemy.

In each of the six dioceses there is a diocesan council, consisting of the bishop, his first officer and the school inspector. This inspector, who is appointed and paid by the crown, travels about among the schools of the diocese and makes a report upon their work. To this diocesan council the deans are responsible, each of whom exercises general control over the various boards in his deanery. The school districts and municipal districts coincide, and the municipal council unites with the district school board in the administration of school affairs; the voting and spending of money being in the hands of the council. Each district is again divided into circles, and by law each circle has its school with a local board to deal with purely local matters. The financial support is derived from various sources—state, province, and district funds, together with the fees from the few paying pupils; for while instruction is practically free, it is understood that those who can afford to pay for it shall do so. Besides these revenues, there is in each of the twenty provinces a fund to aid poor parish schools, to help pay the teacher's salary, as well as to buy land for his use.

The law of 1848 required in each town at least one common school, and in each class not more than sixty pupils. A higher class for more advanced instruc-

tion might be formed, if considered advisable by the local board.

The law of 1860 divided country schools into two sorts—the lower and the higher. The lower schools might be ambulatory when the difficult nature of the country and scattered population made a fixed school impossible. Otherwise, a lower school must be maintained in every circle, or wherever there were thirty pupils of school age to attend, and each school must have a teacher who had been trained in one of the normal schools. The higher schools were to be optional with the district boards, and might be collectively supported by several circles.

In 1869 attendance was made compulsory, and the school age was defined as extending from the seventh or eighth year, in town or country, respectively, to confirmation, which occurred usually about the fifteenth year.

The law of 1889 put both urban and rural schools on a new basis; and, while some of the measures were tentative and have in a few cases been abandoned, the progress of education in Norway during recent years is in a great measure due to its liberal progressiveness.

In accordance with this law, the urban schools consist of three divisions, for which age forms the basis of classification. Sufficient schools are to be provided to give seven years (from six and one-half to fifteen years of age) free schooling to all children who are not physically or mentally defective, and for these proper care, and instruction when possible, must be provided by the parents, or failing them, by the state. The law requires, too, that the working hours of employed children do not interfere with the school hours.

The extension of the powers of the local board is

one of the chief features of this law. To this board was now given control of the appointment of teachers, which had formerly rested with the crown, as well as of the general plan of instruction, especially in the two higher divisions of the schools, and with regard to the continuation classes. They consult with a council composed of teachers regarding educational matters, with the board of health regarding the school buildings, etc., and report to the municipal council as to financial requirements.

Religion naturally holds an important place on the school curriculum, which comprises also the Norwegian language, history, geography, arithmetic, singing, with gymnastics and manual training for both girls and boys, and in the higher classes, civics and natural history.

The rural schools, on the other hand, have two divisions made on the basis of age, the lower of which may be again divided to provide "infant schools" in the mountainous districts. Between 1860 and 1889 the majority of ambulatory schools had been replaced by fixed schools, but owing to the nature of the country they must always be an indispensable part of the rural school system.

The prescribed school term is from ten to fifteen weeks, so that the same teacher, who must by law teach at least twenty-four weeks in the year, may take charge of both the higher and the lower divisions consecutively. Continuation schools exist at the option of the district board. The scheme of control is the same as that in the towns, affairs being in the hands of the district board, whose chairman is always a clergyman.

The course of instruction in the country schools, while apparently much like that in the city schools, is of a lower standard. Of recent years the teaching

of Sloyd is becoming a more and more prominent factor.

The teacher, whether urban or rural, is required to be at least twenty years of age, to profess the Lutheran faith, and to have passed the normal school examination, or to have some equivalent standing. He is appointed by the local board, but is not permanently installed until the authorities are satisfied as to his fitness.

Teachers' salaries are regulated by certain fixed rules, according to the length of their service and the grade of school in which they have taught.

In 1891 a bill was passed by the Storthing which dealt with the pensions for elementary teachers, arranging a scale adjusting the amount of pension to length of service and salary received. The pension fund is maintained by the government and the parishes, and the payments are left in the hands of the local board. This is considered a better and cheaper method than a self-pensioning or annuity system.

So much has already been said of the character and purpose of Sloyd, that it will suffice here to note the place it holds in the Norwegian system. Always ready to encourage whatever seemed likely to promote the practical aim of education, the Storthing in 1866 gave a grant to every public school where Sloyd was taught. It was introduced a little later into each of the public normal schools, and a special school was established by enthusiasts. Though making progress throughout the whole country, it has only recently been obligatory, and even yet is optional for boys under eleven years. Carpentry Sloyd is the form in use.

The municipal council of Christiania has on its own initiative appointed a Sloyd inspector and established a school for the training of teachers.

Secondary Schools.—The secondary schools, though they are at the present generally gratuitous, do not aim at placing higher education within the reach of the masses, but rather at training those who have in view a career at the university or in some of the special schools.

Early in the century, before a system of popular education had been formulated, secondary schools, maintained by private means, existed in the larger towns. A report of 1837 gives an account of Latin schools, which prepared for the university, and of "citizens' schools" where, besides the ordinary branches, English, French, German and Latin were taught. But the scope of the various secondary schools seems not to have been clearly defined until the laws of 1869-70, which determined the precise status of "middle schools" and "gymnasias," and arranged a course of study for the former—a course which was followed for twenty years.

The middle school was to hold an intermediate rank between the common school and the "gymnasium," receiving pupils at nine years of age, after they had passed the lower grades of the elementary schools, and preparing them during a six years' course for the Latin gymnasium, the Realgymnasium, or a practical career. The course during the first three years embraced the ordinary branches with the addition of German, but at the fourth year the student chose between the "Latin course," which led to the classical gymnasium, and the "English course," which led to the Realgymnasium.

This arrangement of studies, however, seems not to have proved satisfactory. The steadily increasing popularity of the Real studies was at war with the traditional faith in the classics, and the outcome of a discussion extending over several years was the ap-

pointment of the Royal Commission in 1890. A synopsis of their recommendation is published in the *Journal of Education* (London) as follows:—

“The Royal Commission for Reform Movements in secondary schools has suggested a scheme for their better organisation. In conformity with the express wish of the Storthing, secondary schools are in future to be a continuation of the elementary grades, and children are to receive elementary instruction till their eleventh year. As at present, secondary schools are to be divided into two divisions—middle schools and gymnasia. But while the pupil now enters the middle school at the age of nine and remains there for six years, the new curriculum is to cover four years (from the eleventh to the fifteenth), that of the gymnasium extending, as now, from the fifteenth to the eighteenth. The Real gymnasium is to undergo many alterations, but the Latin gymnasium is to be divided into two parallel divisions, with and without Greek. The requirements in Latin and Mathematics are to be considerably reduced, while the native language, modern languages, geography, physics, and drawing are to receive much greater attention, and Sloyd is to be made compulsory throughout the course of the middle school. This scheme was sent to the University of Christiania and to all public secondary schools, with the request that the professors and teachers comment upon it before the end of the year (1891) to the department of public instruction. The commission states that ancient languages take more time than necessary, that in middle schools there are too many subjects of instruction and it requests a new gradation of studies.”

The Act of the 27th of July, 1896, which at present controls secondary education, was founded upon the report of this Commission.

The University.—Although the history of the University of Christiania practically dates from the organisation of the faculties in 1824, the charter had been granted by Denmark in 1811 to allay the rising discontent of Norway at that critical time. In character and history, the University is typical of the national life. It is democratic, having neither chancellor nor vice-chancellor, but only a dean in charge of each of the five faculties. It is rational, following out its original line of development, little influenced by foreign tendencies, and hampered by no traditions.

Its faculties are those of law, medicine, theology, philosophy, and the sciences, to any of which the student is admitted on having passed the *examen artium* of the gymnasia. After a course of six years in medicine, or four years in any other faculty, he is admitted to a degree by an examining body composed of his professors.

Since 1881 women have been admitted to all the faculties, and since 1884 have the same examination privileges as the men; but as the girls' schools are inadequate, they must have private instruction to prepare for entrance.

Special and Technical Schools.—Since 1883 the education of all classes of defectives has been compulsory, and to some extent gratuitous. Well-appointed schools with their carefully graded classes have attained a high degree of effectiveness in both general and special instruction, and when the condition of the pupil admits of it, manual training is added, of such a sort and to such an extent as to form the basis of a good trade.

Technical education in Norway, whether of a special or general sort, belongs to the latter half of the century.

First may be mentioned the schools of agriculture, supported by the provinces, and the military and naval schools supported by the government; which, in addition to a special training offer some general education as well.

Perhaps the earliest of the industrial schools was that in connection with the Royal Navy Yards at Horten, founded in 1853 and maintained by the government. Its pupils are workmen in the Yards, who, whether they have in view a higher course of engineering, or the career simply of a skilled mechanic, must serve a practical apprenticeship. Instruction is given in physics, applied mathematics, drawing, chemistry, theory of machines, and English. The courses are arranged to meet the requirements of the various classes of pupils.

In 1867 a school of mining was opened at Konigsberg under the control of the Board of Mines. Here, too, the pupils must be practical workmen as well as students.

The present system of general technical education dates from 1868, when Mr. Christie's scheme was brought before the Storting. It is based, in a large measure, upon the Swedish system, and has the same three divisions, namely: (1) The Sunday and evening classes designed to give the mechanic technical and general instruction; (2) the technical elementary schools with a course theoretical, practical, and general, covering three years; (3) finally the Polytechnic institute at Christiania, similar to that in Stockholm and in other European centres, the highest institution for the study of technical science.

Finally, mention must be made of the Royal Norwegian School of Arts and Design, founded in 1841, with a board of control appointed by the king, whose mission was "to further the education of mechanics

by instruction in drawing, modelling, the elements of mathematics, etc., to give those who intend to become artists an opportunity of perfecting themselves in drawing, and to form through its governing board a society of arts, which is to spread an artistic taste throughout the country."

CHAPTER IX.

ITALY.

THE Frenchman who said "happy the land *without* a history" might well have had Italy in mind. She was in turn the prey of the northern barbarian, the possession most coveted of the eastern emperors, and the conquest of Charlemagne. The hopeful signs of national life apparent in the growth of the little republics were offset by their petty jealousies, and by the feuds of Guelf and Ghibelline which endured through the Middle Ages. In later times these little states were banded to and fro, the playthings of diplomacy or intrigue. In the eighteenth century, though nominally divided into independent principalities, Italy was under the domination of Austria. Tyranny, corruption, and immorality characterised the petty courts, but withal there was some degree of commercial prosperity, and, in some of the cities at least, the memory of a great and glorious past.

The advent of Napoleon marked a new era. What his wars cost Italy in men and treasure was twice paid by the creation of a national spirit and of a belief in the military prowess of her men, and by the experience, however brief, of order, industrial progress, and regularly administered justice. By means of good roads internal commerce was put on a new basis; brigandage gave way before a new police system. The national debt was diminished by the pro-

ceeds of the dissolution of many monasteries. The newly formed states, whether under Beauharnais or Murat, were organised under French method, the Code Napoleon replaced the unsorted mass of old customs by courtesy called laws, and all looked to Paris as their capital.

System and centralisation characterised educational administration as well as political. The control of education was taken out of the hands of the religious orders. The Jesuits fled. A system of primary schools was inaugurated in Lombardy and Naples, together with a regulation enforcing attendance. Secondary education received extraordinary impetus. The academies at Turin, Genoa, and Pisa were reorganised "as integral parts of the University of France." Always practical, Napoleon did away with the moribund and superfluous schools and universities, and gave aid to the worthy ones. He established schools of applied science not, meanwhile, neglecting the study of letters. He founded the Superior Normal School at Pisa which Arnold called, in 1868, "the sheet anchor of Italian secondary instruction."

The congress of Vienna in 1815 turned a page backwards. Ignoring the people of Italy, the Allies strove together concerning the partition of the country, and the result was the restoration of the old conditions and the resetting of old boundaries. The former sovereigns, most of them Bourbons or Hapsburgs, reinstated by the help of Austria, became "puppets, the strings of which were pulled invariably from Vienna."

But the reaction was not violent. The princes were too wise to try to uproot the Revolution all at once. Some of them, too, had a real regard for their people. But all were alike in their horror of

liberalism and, except in the north, discouraged education "lest the commons might learn to think for themselves."

Lombardy and Venetia had gladly welcomed back the Austrians, as they would have welcomed any change from the ruinous wars of Napoleon and the galling surveillance of the French police. The Austrians made fair promises for the liberty of these states—and gradually broke them. Their soldiers were everywhere. The courts became Austrian. Austrian history and law were taught in the colleges and Austrian text-books forced into the primary schools. The schools of Lombardy and Venetia were, however, perhaps the best in Italy at the time. Each commune was by law forced to provide an elementary school, and there was, in theory at least, compulsory attendance between six and twelve years of age. In 1834, sixty-eight per cent. of the boys of school age were actually in attendance—a truly remarkable showing! In the larger communities there were "major elementary" schools where the course included Latin. Each town had its gymnasium (secondary school of lower grade), and there were in all twelve lyceums (secondary schools of higher grade).

In Piedmont, Austrian domination was a thing feared rather than experienced. Though possessing far less natural adaptation for the study of letters than Tuscany, for example, Piedmont had long been the home of whatever intellectual life there was in Italy. She had a royal house of her own race—not a cadet of Austria or France—a just administration, and the beginnings, at least, of a good system of education. In 1729 and 1772 the "Royal Constitution" of the House of Savoy had taken the control of secondary schools out of the hands of the religious orders, and to train teachers for these schools

had founded the "*Collegio delle Provincie*" in connection with the University. Recognising the power that lay in a state-controlled education, the Turin government had instituted the "*Magistrato della Riforma*"—the earliest beginning of a council of Public Instruction. By means of the "*Magistrato*" the method and industry of the Piedmontese administration were introduced into the educational system—much of its rigidity, too, perhaps. The schools and universities were given a strictness of discipline and examination important not only in ensuring their own success, but more widely so when in later years all Italy learned to look to Piedmont. At the departure of the French, the exhaustion and discontent of the people precluded any development of the primary schools. True, Charles Felix in 1822 had decreed that every commune should provide a school, but as no grant was made, and the communes without schools were poor, the law became a dead letter, and as late as 1845 scarcely one-half of the communes had schools.

Upon resuming his throne, King Victor Emmanuel, with the characteristic devoutness of his house, had sanctioned the return of the exiled ecclesiastics, and secondary education passed entirely into their hands. They successfully opposed Balbo's attempt in 1817 to found a normal school to train secondary teachers—an attempt not repeated for a quarter of a century. The priests maintained discipline of a rigid, conventual sort, and taught Latin and Greek well, but there was no modern language or literature, and very little science upon the curriculum. The control of secondary education gave the church a great and increasing power, because in these schools were trained the sons of the middle and wealthy classes. So great was the growth of the church that it was estimated

in 1846 that one person out of every 214 was an ecclesiastic.

The revolt of 1820 gave the Jesuits the excuse they awaited to seize the universities of Turin and Genoa. Henceforth all university affairs, whether of morals or government, passed under the narrowest censorship. In place of intellectual freedom there grew up a system of spying, and the college doors were at once closed upon those who ventured to possess independent opinions, whether upon civil or religious affairs.

Tuscany, though the home of the Renaissance, makes very poor showing in the matter of education. The curse of indifference had fallen upon the Tuscans. They accepted the weak, corrupt government of the Hapsburg Leopold just as they accepted the yoke of a debased and ignorant priesthood. Thanks to the opposition of the Church there was no organised system of education. In theory there was a school in every commune, but in reality only one-tenth of the boys of school age were in attendance, and the teaching was unsatisfactory. There was no provision for girls.

In secondary education, the want of interest on the part of the government is again apparent—there was only one state-controlled school. With inadequate preparation in the secondary schools, real scholarship was hardly to be expected in the universities. Medicine and law were studied, but there was no faculty of arts. In other respects, however, the Tuscan universities of Pisa and Siena were favoured—they were under the patronage of the state, and were not controlled by the Jesuits.

The state of education in the Kingdom of Naples is well illustrated by one of her laws, which required “that one-third of the town-council should be able to

read and write." A law of 1810 had declared that every commune should have its primary, and every province its secondary school, but there was a tremendous gulf between the letter and the practice of the law. The want of earnestness on the part of the people, and the active opposition of the Church had frustrated all attempts of the ministry and a few liberal-minded men to open new schools. So, even so late as 1840 hardly one boy in three went to school, and for girls there was no provision, unless in the convent schools. "There were whole communes," says one writer, "without a literate peasant."

The secondary schools were schools of Latin grammar, and were as lifeless as elsewhere. The universities were, however, independent, and attracted many students; but with the vicious social conditions of the time, and with a court like that of the Bourbons, the tendencies of university life were anything but wholesome.

The Papal States, which in 1827 numbered two and one-half million souls, were governed entirely by ecclesiastics. Strong as was the attachment of the people to the Pope, there was a steadily growing discontent, and the secret revolutionary societies found nowhere a better recruiting ground. The two most notable characteristics of the government were conservatism and confusion. The College of Cardinals was composed of old men, and torn by factions. The Popes who were successively elected from among them were pledged now to one party, now to another, and each strove to undo the acts of his predecessor. The public accounts were badly kept, and never published. Nothing was certain about the finances but the increasing debt. The Church conscientiously frowned upon modern progress represented by good roads, railways, telegraphs, and the study of modern

economic questions, as fatal to herself. She saw in liberal education the dangers of heresy and sedition, hence the school curriculum was formal and narrow. The Commissioner of Studies, an ecclesiastic, had general supervision. The system of education, while resembling those of the other states of Italy in its division into primary, secondary and superior, was, outside of the University, in reality no more than an irregular collection of private institutions under the control of various religious orders. The parish school in the rural districts carried on elementary education under the management of a local board. Secondary education was in the hands of the Jesuits. The seven universities had long been crippled by inquisitional patronage. Lest they might, like those of other states, develop liberal sympathies, they were spied upon, and their course of studies censored even to the exclusion of Dante, while at Modena Latin was the medium for lectures—a guarantee of the absence of radicalism!

During the long period of apathy extending from the Congress of Vienna to the accession of Pio Nono in 1846, Italy might be compared to a volcano which, while apparently quiet, is seething beneath the surface, ready to burst forth in response to the least disturbance in its neighbourhood. The French Revolution had, for the time, wrought no less administrative change in Italy than in France itself, and nowhere had revolutionary principles taken firmer hold. After the reinstatement of the former governments the annulling of civil and political reforms, the restoration of powers and privileges to the swarms of ecclesiastics, and the rigid press censorship aroused bitter discontent which grew all the more bitter because its expression was cruelly punished. During the years of Napoleonic domination the Allies had them-

selves sought to inspire the Italians with a national resentment of foreign rule, and this now recoiled upon Austria. Secret political societies flourished in this atmosphere. In 1820, the Spaniards proclaimed a Constitution based upon the ideals of the earlier days of the French Revolution, and this Constitution seemed to embody the inarticulate longings of Italian malcontents. Moreover the example of the Spaniards inspired courage. Accordingly the army of Naples mutinied and forced Ferdinand to grant the Constitution. Soon a military revolt broke out in Piedmont, and the Constitution was proclaimed there. The Allies met in conference and authorised Austria to crush the revolt. Terrible vengeance followed in Lower Italy. The Pope had as little mercy upon the liberals in his domains, while in the north, reform received a paralysing blow. Lacking a common object and a common leader, the liberals could do nothing. The Carbonari, the sole organised revolutionary force, after its failure in 1820-21 ceased to be a real menace to the authorities, while its members served as victims of those miserable punishments which terrorised and degraded the helpless Italians.

Again in 1830 the spirit of resistance was revived by the Paris Revolution, but the revolt was soon quelled, and the Austrian troops marched on to Rome. In the years that followed, the people goaded by starvation and disease rose spasmodically, only to suffer quick and sure defeat.

With the disappearance of the Carbonari there grew up a new society, called Young Italy, with Mazzini as its prophet. Though its aims were hopelessly wide, and its tendency so anarchistic as to frighten away those who might have brought powerful support, the infectious enthusiasm of its leaders

kept alive the agitation for freedom until the time was ripe. From the universities Young Italy drew adherents who became the thinkers of the movement, and on the other hand transformed the politically ignorant artisan into the strongest support of the liberals in the final struggle.

A more rational liberalism was winning its way over Mazzini's extreme republicanism. The moderate party looked forward to a monarchy, and all circumstances pointed to Charles Albert of the house of Piedmont as the future king. From his youth he had been the foe of Austria; Mazzini's bitter attack upon him in 1830 for refusing to head a rash uprising won him the confidence of the moderate liberals; he alone of all the princes was the Italian sovereign of an independent state, an Italian in birth and sympathy.

With the question of leadership solved, liberalism grew apace. In 1846, Pius IX., on his accession, announced himself a liberal and began a constitution. "The air was thick with schemes of charity and education, with projects of railways in which everybody should have shares, with universal fraternity and optimism." The millennium seemed at hand. Naples again forced from the Bourbons the Constitution of 1820. In 1848, heartened by the success of the French Republicans, Italy rose, and forced Charles Albert to declare war against Austria. Pius, thoroughly frightened by the consequences of his liberalism, retracted all his reforms and fled. The other princes had likewise departed in the face of the crisis and Italy saw in Piedmont her only hope—a hope she did not abandon even after the defeat at Novara. Italy had begun to look to Piedmont not only as the leader in the struggle with Austria, but as a model in matters civil and

educational. Hence the history of Piedmont becomes, in a measure, the history of Italy. In 1848 the first parliament of Piedmont met, and in the same year Charles Albert, of his own will, granted a constitution. The study of English institutions by Cavour, the greatest Italian statesman of the day, showed its effect not only on parliamentary procedure, but in the effort to instruct the people regarding constitutional government. The year 1847 had seen the appointment of a Minister of Public Instruction, and the creation of a Superior Council to assist him. Even in the face of impending war, the Parliament of 1848 set about reorganising the educational system.

The defeat at Novara, in 1849, apparently so hopelessly disastrous, was in reality but a temporary check. Italy had grasped the idea of freedom and unity, and was united in the struggle for it. But Italy had nothing to hope from her own unassisted efforts against Austria, so in the following years Cavour and his colleagues set about raising Piedmont, and with her the rest of Italy, to such a rank among the nations as to command sympathy and material aid when the struggle should be resumed.

The story of the last phase of the struggle is too well known to be repeated here. It is interesting to note, however, that the same year that saw the battles of Magenta and Solferino records also the passing by the Parliament of Piedmont, of the Casati Law. This law is the foundation of the present educational system of Italy. Piedmont had long had a fairly well organised system. It had lacked the centralisation of the French system, it slighted the elementary grades to favour the secondary, it was dominated by ecclesiastical influence, but it was a good basis for a more modern, practical and liberal

system. By the Casati Law of 1859 the Turin government remodelled her plan of public instruction and provided for its extension.

Administration.—The central control was vested in the Minister of Public Instruction. He had to assist him a permanent council, upon whom it devolved to make a report to the Minister every five years regarding the condition of education throughout the kingdom.

In 1867 a council known as the *Proveditorato Centrale* was created and given charge of primary and secondary education. This body continued to exercise its functions until 1881, when an extensive reorganisation of the administration replaced the *Proveditorato* by an Inspector-General and a staff of nine "central" inspectors. At the same time the membership of the Council was increased to thirty-two and a *consullore legale* appointed to advise the Minister and Council. The duties of the Council are judicial and administrative as well as advisory, and the right of final decision rests with the Minister as representative of the king.

In each of the sixty-nine provinces the king appoints a "supervisor of studies," who is associated with the "prefect" of the province and ten councillors in the "Provincial Council." This council has supervision of elementary, technical, classical, and normal education, representing the Minister with regard to budget, regulations, appointment of teachers and programme of studies.

For each of the districts, into which the provinces are subdivided, the King appoints "delegates" who represent the Provincial Council. Their duty is to watch over elementary and secondary education within their own district. They are non-salaried and hold appointment for three years. Each district,

too, has its inspector, who, since 1881, must be duly certificated.

Elementary Education.—The Casati Law decreed that every commune of 4,000 inhabitants should maintain an elementary school and that all teachers should have certificates of capability. Instruction, moreover, was to be gratuitous and compulsory. The extremely critical condition of political affairs at that time hindered all but the slowest growth. In 1866, the year of the annexation of Venetia, seventy per cent. of those who married signed their marriage papers with a cross. It was not until 1877 that a serious effort was made to faithfully carry out the Casati Law. The "compulsory" clause was re-enacted with additional conditions and penalties. Parents were obliged to send their children between seven and nine years of age to the primary schools, or to have them properly instructed privately. Instruction must continue beyond the ninth year if the child had not mastered the studies of the lower grade.

A marked improvement followed this measure. Communes which had evaded the law of 1859 now provided themselves with schools. A great cry went out for trained teachers. The percentage of illiterates diminished with encouraging rapidity. By a law of 1888 it became necessary for every youth, in order to be placed on the registration list for the holding of public office, to possess a certificate of having passed the final examination of the primary schools. Still, at the very end of the century, educationists complain that the compulsory laws are not well enforced and the penalties rarely exacted.

The increased interest in popular education, the better training of teachers, the influence of men sent abroad by the State from time to time to study for-

eign methods, had their natural result in a more extensive programme of studies and the introduction of modern ideas. In addition to the usual programme we find gymnastics, and civics, while a decree of 1899 has added manual training, agriculture, hygiene, and domestic science. Religious training is provided by the communes when requested by the parents of the children.

The "Asili."—The lowest primary grades are known by the term *Asilo*, or asylum, which corresponds to our kindergarten. From time immemorial the Church had maintained asylums in the sense of orphanages, where children were maintained and educated until self-supporting. The modern *asili di infanzia* were introduced by Aporti, who founded the first *asilo* at Cremona about 1827—an attempt at the regeneration of Italy, through her little children. The growth of these school-asylums was at first very slow, all the *asili* were private. In 1844 they became a recognised feature of the system of Piedmont, and since 1860 have increased with great rapidity. The introduction of the Froebelian system in 1868 added a new factor to the movement, and three years later a Froebelian training school for teachers was established at Florence. In 1898 there were 2,989 *asili*, 941 of which were private. Instruction is not compulsory and is generally gratuitous. The course is designed for children from four to six years of age, in some sort preparatory to the elementary schools.

Secondary Education: The Classical Schools (gymnasiums and lyceums).—The commission which inquired into the condition of these schools previous to the passing of the Casati Law, found many deficiencies. The attendance was extremely irregular. There was no standard of capacity required of the

teachers. The programme offered in addition to Latin and a meagre study of Italian, only a smattering of philosophy, and mathematics and physics. The last named subjects, coming, as they did, at the last of the course, and being taught with little skill and less equipment gave little result. The examinations had come to be, says a report, "a mere form, so great was the laxity used in passing one and all of the candidates."

The Casati reforms included a programme greatly resembling that of the French schools; a staff of inspectors-general as the central authority, with a *providitore* and a council to represent them locally; also a recognised standard of qualification for teachers. To counteract the laxness of secondary, as well as university examinations, a *licenza primariale* was demanded upon entrance to the lyceum, to show that the student had satisfactorily mastered the studies of the gymnasium. A similar "license" was required of the student on passing from the lyceum to the university. Unfortunately these measures were not well carried out. Italian ministers succeed one another with too great rapidity for persistence in any policy. The great dissimilarity in the condition of the schools made uniformity at best of slow attainment. The state yielded to importunity and made concessions, hence a lot of evils crept in, and the law failed in its effect. For example, it was not until 1894 that the "licenses" were regularly insisted upon. Moreover, until the universities insist upon a higher standard of scholarship there will be a questionable indulgence in examinations.

Private Institutions undertake no insignificant part of secondary education, chiefly on the classical side. They regulate their own affairs altogether, but must submit to state inspection. Since 1867

the schools of religious corporations have ranked as private institutions, but, at the same time, are subject to strictest oversight—for example, the bishop cannot appoint a teacher without consent of the government. These schools bear an important part in the education of the girls. Beyond the primary grades where co-education—an idea contrary to Italian liking and tradition—prevails after the same manner as in our own schools, there is very little provision for girls. The convent schools piece out the, to our eyes, very incomplete system, for the higher education of women is not in Italy as yet a popular question.

The Technical Schools.—However advanced the theories of her educationists, and however generous the purpose of her laws, Italy, as a whole, is still conservative, and preeminently classical in her educational sentiment and practice. In spite of the dearth of intellectual effort, and the misery of the peasant class, coincident with Austrian occupation, there had been some measure of progress among the commercial and industrial classes. Italy had democratic traditions, and French influence was strong. Thus it was that the modern reaction against exclusively classical training gained footing in Italy and the claims of the practical in education came to be recognised. In 1838 a law was promulgated in Lombardy-Venetia on the subject of technical and commercial schools. These schools were maintained partly by the towns in which they were situated, partly by the state. A boy could enter from the first class of the gymnasium into the lowest class of the technical school, where the course extended over three years. Upon the programme are found Italian grammar, philosophy, chemistry—with an option of commercial branches.

In Piedmont the beginning was scarcely conscious.

In 1840 Latin was struck off the programme of the primary schools, and at the same time the programme of the secondary schools received the addition of history, geography, and arithmetic. In 1848 there was instituted a course in the public schools in the way of experiment, as it was then said, comprising modern history, modern languages, science, etc. This technical course began immediately after the primary grades and lasted five years, parallel with the gymnasial course. The success of this "experiment" is evident in the provisions of the Casati Law, which allowed those municipalities which were legally bound to maintain a gymnasium to substitute for the classical a technical school. These classical and technical schools were to be quite distinct—on no account intrusted to the management of the same person. The technical course was divided into two grades. The first part, comprising three years, was given to the "technical schools;" and the second part, of two years, to the "technical institutes." In 1861 the division was widened by the attaching of the "institutes" to the Department of Agriculture.

Owing to the various conditions attending their establishment, the technical schools differ materially in their government and maintenance. There are the government schools subsidised and directed by the state; the "assimilated" schools directed by the communes, according to the rules governing state schools with regard to studies, appointment of teachers, etc., and the free schools managed by communes or provinces by their own officials and in their own way. The course is general and non-classical in character, consisting of modern languages, geography, history, etc., and emphasising mathematics and natural science. The purpose in view is to prepare the pupils for business life or for the technical institutes.

The technical *institutes* have now a four years' course which divides into two two-year periods. In the second half the student confines himself to the particular department he has chosen, while in the first half the studies are common to all. The diploma from the physico-mathematical department entitles the student, like the *licenza liceale*, to admission into a university.

The entire separation of the classical and technical schools was a great mistake in point of economy. The communes had been impelled by differing influences to establish both sorts of schools when their funds were scarcely sufficient for the proper maintenance of one—an extravagance all the more absurd because in the lower classes of both schools virtually the same programme prevailed except with regard to Latin. The choice between technical and classical training, moreover, had to be made before the boy was old enough to show any marked aptitude for one or other. Furthermore, the number of schools was far greater than could be justified by the number of scholars. Arnold, in his report of 1868, gives an average throughout Italy of only nine pupils per class in *licei*, of ten in the *ginnasi*, and in the *scuole tecniche* of only eight. He goes on to say that the means of retrenchment proposed by the Council were, in the case of the *licei*, the introduction of mathematics and natural science into the course, or where that was impossible, to limit the course to two years; in the case of the *ginnasi*, to amalgamate the lower forms with the technical schools, not introducing Latin and Greek until the last two years.

A report of 1893 gives the following sketch of the programme of study in the classical schools. Out of 176 hours of study per week in all the eight classes

(five gymnasium and three lyceum), forty-five hours are given to the study of Italian language and literature, fifty-eight hours to Latin and Greek, thirty-two hours to history and geography, sixteen hours to mathematics, and twenty-five hours to philosophy and science.

Whatever may be the intellectual results of this readjustment, its numerical results are not startling. In 1893 the gymnasia averaged but sixty-eight pupils, the lyceums forty-two. From another point of view these figures are ominous, showing as they do, how many of the pupils leave school without entering the lyceum. They go out into practical life without a practical education, and with incomplete classical training. In the end the technical schools must find their proper sphere in educating this class of students, but Italian predilection for classical training dies very slowly.

The Training of Teachers.—The Casati Law had required that teachers should have “licenses,” and to enable teachers to meet this requirement normal schools sprang up with great rapidity. There are two grades, the higher and the lower. In the lower grade (until 1883 called the “*scuole magistrale*”) are trained the teachers for the lower classes of the elementary schools, and the two years’ course comprises a thorough training in the subjects of the elementary school programme, together with some little study of pedagogy. The higher grade covers three years of study in continuation of the lower grade course, adding book-keeping and more advanced mathematics, and giving more time to the study of pedagogy.

The majority in attendance are women. Many of these have no intention of becoming teachers, but shut out, as they are, from the secondary schools,

find in the normal schools a means of obtaining a more advanced and liberal education than the elementary or convent schools afford.

Teachers in elementary schools must have reached the age of eighteen years, and cannot accept permanent appointment before they are twenty-two. The salaries are low, but, since 1886, regularly graded and adjusted by law. There is, moreover, a pension fund, organised in 1879, to which provinces and state contribute according to a fixed ratio.

Teachers of secondary schools are graduates of a university and are appointed by the king. They are of two classes, "titular" and "regent" professors; the former must hold the degree of "doctor," and the latter, a normal certificate at least.

The Special Schools.—Though liberally subsidised by the state, the schools of music and art can scarcely be said to form a part of the educational system. They are both numerous and efficient, and perhaps more than any other national institution, have lived up to their ancient traditions.

Italy has many schools where practical instruction is imparted in such subjects as agriculture, commerce and industrial art. The expense is divided between central and local authorities, and the aim is to teach the masses the best ways of doing the things which bring them their livelihood.

Under this head, too, come the schools for defectives, to many of which is attached a training school for their teachers.

Superior Education: The Institutes.—The first of these was the Institute at Milan, which was designed to be the head of the technical side of the system, just as the university is the head of the culture side. The Superior Institutes now number eleven, and include schools for engineers, the literary and scientific acad-

emy, schools of veterinary surgery, the Florence Institute "for the perfecting of studies," and the higher normal school. They are under the jurisdiction of central authority and their professors enjoy the rank and privileges of university professors.

The *superior special schools* have to look for support and control to the Ministry of agriculture, commerce, and industry.

The Universities.—For many centuries Italy has been famous for her universities. Those of Bologna and Salerno rivalled the University of Paris in the height of its popularity. The state and the nobles lavished money upon them and students flocked thither from all Europe. Later, in the sixteenth century, Italy was the starting point whence the Revival of Learning spread over Europe. But, while the conditions have passed away which went to make a great mediæval university, the old institution has come down to us in all its unsuitability to modern requirements. In our time we find a conservatism in study, an extravagance in management, and a laxness of discipline scarcely credible.

There are seventeen national and four "free" universities (the latter independent of state control). Many of these have few students and meagre funds. It is impossible to obtain scholars of first rank for all the professorial chairs.

Generally speaking, the universities comprise four faculties:—I, law; II, medicine and surgery; III, philosophy and letters; IV, mathematical, physical, and natural science. The Casati Law gave the theological faculty into other hands.

Strangely enough, the preference for culture-studies which sends the majority of the boys to the classical secondary schools does not extend to the universities. The students desert philosophy and letters for

the wage-earning studies of law and medicine, and several universities have no arts faculty whatever.

More than one effort has been made by the central authority to reduce university organisation to a more economical basis. In 1867 the Council constructed a scheme whereby the faculties of letters were to be reduced to three, and these were intended to serve, apparently, for the educating of secondary-school teachers. Likewise the physico-mathematical faculties were to be only three. These faculties only were to have the right of examining in letters and mathematics. This left to most universities only two faculties—two had only one each. Pride in their traditions made the starveling universities jealous of interference, and these measures met effective opposition.

In 1893 financial stress impelled the government to cut down its educational budget, and the extravagant university system presented opportunity for retrenchment. The government began by withdrawing its grants from the free universities. The students at once revolted, and the proposed step of suppressing six of the weakest universities was not attempted. The outcome was a diminished grant to all.

The universities are governed by the "by-laws" of 1890, with modifications and additions of 1899. In each university the directive board is composed of the rector, the academic council, the faculty presidents, and the assembly of professors.

Each matriculant must be a graduate of a lyceum or technical institute, or, if he be a foreigner, he must give evidence of his right to enter a university. The examining board consists of a commission of professors appointed by the rector.

The rector is appointed by the king on the nomination of the professors, and each professor on the

recommendation of the rector and his fellow-professors.

Prior to 1899 the universities (excepting the "free") were under the joint control of the state and their provinces or municipalities. Since then they have been self-governing—under the supervision of a state representative.

The clamours of the students, however, run far ahead of actual reforms. They wish to have a voice in the nomination of the rector,—to have the course made more elective, doing away with the rigidity of the present programme of studies,—to carry this principle into matriculation, allowing freedom of examination to any student whether or not he has followed the official course of preparatory study,—to admit women to the professions,—in short, to have the Italian universities keep pace with all that is most modern and most liberal.

CHAPTER X.

RUSSIA.

UNTIL the time of Peter the Great, Russia bore little intellectual relation to Western Europe. This monarch coveted for his country the culture of the West, and to this end all his schemes tended. With his own hands he worked in Dutch shipyards, that he might learn to build a navy for Russia. He founded schools; sent men abroad to learn what other lands could teach; brought scholars from abroad to educate his people: he revolutionised Russian society—all this in order that Russia might hold her own with the nations of Western Europe.

But an educational system is not made in a day. There was need of buildings and equipment; there was dearth of instructors; but worst of all, there was an utter indifference to education on the part of the people. These difficulties Russia has not overcome to this day.

Catherine II. continued the work of Peter the Great. Three Universities were founded, people's schools of various sorts established in the towns, and several gymnasia for secondary instruction. She ordered a commission in 1782 to reorganise elementary education, with the result that the schools were divided into two sorts—one for the rich, with a four-years' course, and the other with a two-years' course, for the poorer classes. To improve the teach-

ing force, she instituted a normal gymnasium at St. Petersburg, and exacted certain proofs of teaching capacity.

Toward the end of Catherine's reign all movements, civic and educational, were submerged in the overwhelming tide of the French Revolution. The strong foreign influence which had guided Russian school administration from the time of Peter the Great, now came to an end. On the other hand, there sprang up, early in the nineteenth century, a narrow patriotism, and a distinct antagonism towards foreigners, which have brought a bitter harvest of badly officered institutions of learning and a constant discontent, particularly in the provinces undergoing the process of official "Russianisation."

Alexander I., on coming to the throne in 1802, at once began the construction of an organised educational system. The Committee of Education, of Catherine's day, was replaced by a Minister of Popular Enlightenment, into whose hands the task of organisation was committed. The next year—1803—the country was divided into districts, and a curator in direct communication with the ministry was placed in charge of each. These curators, who resided at the capital, met with the Minister to discuss the more important questions of educational policy. This was the chief school-board. The immediate charge of school affairs in each district was given to the university of the district. This arrangement, obviously detrimental to both parties, lasted until 1835.

This system attained a centralisation hitherto unattempted. The heterogeneous mass of schools was classified into four divisions—parochial, district, gymnasia, and universities. The parochial schools were instructed to so organise their course, as to prepare for the two-class district schools. These schools,

in their turn, were to be preparatory to the gymnasias. By a decree of 1804, Alexander placed the gymnasias on a firmer footing. Every considerable town was to have a gymnasium of at least four classes, and a gymnasial course was made a condition to civil appointment.

The generous attitude of the Crown towards higher education is evident in the founding of several new universities. But the step was premature. There were no men to fill the Chairs—there were few students. A university course promised little monetary reward and scholarship had, for its own sake, little place in the ideal of the Russian youths.

While no compulsory clause was appended to this scheme of education, it was intended that all Russians should avail themselves of the instruction provided by the state. This disregard of differences of creed and class did not sort well with the manifold organisation of Russian society. During the next few years, special schools rapidly increased in number. There were separate schools for naval officers, clergy, civil service, indeed for almost every class and craft. The nobles secured such private tutors as they were able, and educated their children at home.

The insurrection, unsuccessful though it was, that ushered in the reign of Nicholas I., forced the conservative Czar to some measure of reform. The want of national feeling which had so nearly proved fatal to the monarchy, the ease with which the people fell a prey to the demagogue, seemed to point to an effective national educational system as the solution for all difficulties. From this standpoint the statute of 1828 was framed. Recognising the impossibility of merging all ranks into the four grades of schools of Alexander I., the government, in its confessed purpose of forming a system in accordance with the na-

tional traditions and customs, converted these general schools into class schools—the gymnasia for the children of the upper classes, the district schools for the children of the lower officials and tradesmen, and the elementary and parochial schools for the common people.

In the eyes of the Russian ministry, however, education was in reality for the higher classes and for the training of government officials: the elementary schools were left to local initiative, and were granted no aid. Naturally, their growth was very slow. The law of 1828, however, did enlarge to some extent their hitherto very meagre course of studies. There were at this time no inspectors, for, while the governor of the gymnasium had nominal direction of the elementary schools in his district, his report received no official recognition. The expense of maintenance fell upon the parishes or upon the feudal lords in whose domain the school was found. The rural school consisted of one class for both sexes, and was open for five months a year—the town school of two classes was open for four hours every day.

The district school, the precursor of the progymnasium, was at this time, and for many years following, a distinct failure. It seems to have possessed many aims, and to have attained none. Like the German burgher-schools, it was to give the children of the merchant and mechanic class an advanced “elementary” instruction, with special classes in commercial and industrial branches. (This was the duty assigned to it by the law of 1828.) Some district schools, however, with a view to preparing students for the gymnasium, added a course in Latin. Almost everywhere, lack of proper equipment, inferior teachers and a formal, lifeless method of instruction made the schools unpopular. To the in-

dustrial classes they were useless from a practical point of view; to those who, being debarred from the gymnasium by social distinctions, would gladly have fallen back upon them, they offered too little culture.

The gymnasia of Russia, while possessing a rank and purpose in the educational sphere identical with those of other European countries, have had a different history. The Revival of Learning, which gave the *raison d'être* to the higher schools of the West, passed Russia by, and no hereditary veneration for the classics shaped and moulded her secondary schools. These came, ready-made, from the hand of the emperor, with a distinctly modern course, to wit: natural sciences, mathematics, modern languages and a little of the classics. In later years, when the secondary schools of Western Europe were giving more room to modern studies, and insisting less upon the classics, those of Russia were offering special rewards to encourage students of Latin and Greek.

The measures of Alexander I., with reference to the gymnasia, had borne but little fruit. Good teachers were not to be had, and the wealthy and noble families, whence the pupils should have come, preferred home instruction. The law of 1828 gave uniformity to the hitherto diverse gymnasia. Each was to have seven classes, a uniform staff, curriculum, and government. The salaries of the teachers were almost trebled. The prosperity which followed these reforms was counteracted by the injunction (it became law in 1849), which set apart these schools to train for the civil service. The usefulness of the schools was wofully narrowed thereby, and the curriculum in time assumed a peculiar character.

The inefficiency of the secondary schools naturally hampered the universities. Under the regula-

tions of 1804, these were, for imperial institutions, remarkably independent. The curator, responsible to the Minister, had general oversight, but all matters relating to government, discipline, appointment of teachers and course of study were in the hands of the faculty. A complete university had four departments: law, medicine, mathematics and physics, history and philosophy.

Unfortunately, during the troubled years immediately preceding and following the accession of Nicholas I. higher education received a severe check. The anti-foreign prejudice deprived the universities of the élite of their professors. Suspicion of revolutionary tendencies gave rise to the strictest censorship of lectures and the most galling severity of discipline. The powers of the curator were greatly increased while those of the faculty were reduced in proportion.

The statute of 1835 restored much of the old-time freedom, and to the faculty most of their former prerogatives. At the same time the university was relieved of the care of the schools in its district. The university council, composed of the professors, chose the rector with the sanction of the emperor, made appointments to the staff and discussed university policy. An administrative board consisting of the rector and the deans of the faculties dealt with questions of finance and discipline, while the curator had charge of minor details.

The year 1850 found the universities in a worse position than before the statute of 1835. Its council had been stripped of all prerogatives save those relative to the curriculum, and all matters of discipline had been given into the hands of a civil or military official appointed by the curator. Never generously paid, many professors had been forced, by

the increased cost of living, to seek outside work. This, added to their exclusion from any control of their universities, resulted in a deplorable loss of interest. Prompted by fear of revolution, the government abolished the privilege of going abroad for study, lest dangerous ideas might be brought home. The number of students at a university was limited to three hundred. Finally the government appropriated the right of choosing the rector.

The inauspicious opening of the reign of the first Nicholas was followed by a period of war, official corruption and half-suppressed anarchy. The Eastern Question had already begun to loom up with disquieting aspect. The Persian wars, the Polish insurrection, the political upheavals in France and Austria which filled Russian statesmen with alarm, gave the land no peaceful interval for domestic progress. The Czar Nicholas, moreover, was conservatism incarnate, the steadfast enemy of new movements. Every inch an autocrat, he hated the modern democratic tendency which we identify as the outcome of the Revolutionary movement, and pointed to the bloody barricades of Paris in proof of his opinion. He saw a menace in the discussion of modern economic and political questions by professors, and sniffed treason in the liberal aspirations of the students.

But in general the intellectual isolation of Russia prevented her appreciation of the contrast between the freedom of her neighbours, and her own fettered press, galling police system, and inferior education. The glory accruing from the series of successes in war and diplomacy blinded the eyes of the people to official corruption and the disgrace of subjection. The awakening came with the Crimean war. The Czar was not infallible! Official robbery had left Russia defenceless! Popular discontent set bitter

tongues wagging. From secret presses or in manuscript a literature went abroad sparing nothing—not even the Czar.

In 1855 Nicholas died, bequeathing to his son, Alexander II., a disastrous war, an empty treasury, and a political situation of grave difficulty. On the conclusion of the treaty of Paris, Alexander set about lightening the burden of his subjects. His manifestoes revealed such generosity, such courage, such enterprise that a new era seemed begun. A reforming enthusiasm seized the country. "Every one called himself a liberal." A new literature, a new art, modern science in its relation to industry, and a new journalism, transfigured the conservative Russia of Nicholas I.

The question of emancipation of the serfs could no longer be put aside. Twenty years before, Nicholas had foreseen that freedom must come, and thought, to use the words of his son, it was "better to abolish serfage from above than to await the time when it will abolish itself from below." This notable social change was effected in 1860, but not without great sacrifices on the part of both noble and peasant, not even without bloodshed.

It is not strange that the measure which gave citizenship to 22,000,000 people should go hand in hand with reforms in education. At this time only two per cent. of the recruits could read and write. Russia's percentage of illiterates was the largest in Europe. For some years a plan for an extensive reorganisation of education was in course of preparation and the greatest experience, talent, and scholarship had been enlisted. The work was tentative and cautious, and it was not until 1864 that the various reforms were reduced to a statute. This

statute for the first time classified the various grades of schools as *elementary*, *secondary*, and *higher*.

Elementary Education since 1864.—The law of 1864 with its further elaboration of '67, '69, and '74, made elementary instruction gratuitous and nominally, at least, compulsory. It is administered by the *Minister*, his *deputy*, and his *council*. The duty of the council is to adjust matters relating to elementary instruction, such as text-books, the conferring of teachers' diplomas, and, since 1883, the supervision of technical and industrial education.

There are now fifteen "districts" each in charge of its curator, who is appointed by the emperor. He has his staff of inspectors to visit and report upon the conduct of the schools. He appoints directors and has jurisdiction over even the private schools. The *curator council* (composed of representatives of the various educational institutions of the district), has oversight of the conduct of the teaching and official personnel, and has charge of business dealings with private persons, estimates, and the collection of statistics.

For the development of the educational system and its general administration, there is a *district council*—two members of which are appointed by the ministry, two by the local assembly, and one by the town authorities. For local administration there is also a *provincial council*. In provinces where there is no local assembly (*Zemstvo*), the directors of the gymnasia take the place of these councils. The Director of Public Instruction in each province fulfils the duty of chief inspector.

The elementary schools are maintained by state subsidies and by provincial and communal funds. These latter are raised by a proportionate tax on property.

Leaving out the maternal school, elementary institutions are of two grades, the *primary* and the *district* schools. In the matter of patronage and support the law of 1864 classified primary schools thus:

1. Schools of the Ministry of Public Instruction, which are those maintained partly by the state, partly by town and country; and those maintained by private individuals.

2. Schools of the Ministries of Imperial Domains, of the Household, of the Interior; the Department of Mining.

3. Schools maintained by the Church.

4. Sunday schools.

The course in all of these consists of religion, singing, reading, writing, and arithmetic. The relation of religion to education has never become a vexed question in Russia; it has no part in the state programme, but is entrusted to the clergy of the various denominations.

The previous policy of establishing and maintaining crown schools was in 1864 changed to that of simply *favouring* the establishment of schools by local authorities. It was thought that this responsibility would excite greater interest in educational matters. Russian society was not ready for this measure, and the number of schools declined. The state was, in 1871, again obliged to take more direct charge of elementary education. A staff of elementary inspectors was created, and, to make the requirements as to discipline and course of study better understood, the ministry opens and partially maintains a "standard school" in each locality.

The district schools had never produced adequate results and in spite of repeated encouragement dwindled in number. In the meantime there had grown up in the towns a higher primary school hav-

ing from one to six classes. The law of 1872 sanctioned the transformation of the district schools into "*town schools*." The course in the town schools of six classes lasts six years. There is a teacher for each class who instructs in all its subjects—unlike the gymnasium where the teachers are specialists. These subjects correspond to the advanced forms of a Canadian public school. Boys who have completed four classes are entitled to enter a gymnasium without further examination.

Secondary Education.—Secondary education is of two sorts: classical and *Real*, and the schools are of two grades: the gymnasias and progymnasias.

The encouragement by the central authority of classical study preparatory to a university course, and on the other hand the need of a course, complete in itself, better suited to the requirements of those whose education ceased with the secondary grade, led to the addition, in 1852, of a mathematical and natural-science course to certain gymnasias. Another element of confusion as to the scope and purpose had been added by the admission in the regulation of 1849 that these schools were intended to train sons of the nobility for the civil service. Within the next few years, however, it came to be recognised that secondary schools must become the means of higher culture for the whole nation, and must in number and character, keep pace with the progress of elementary education. Buildings were bad and equipment meagre. Teachers were frequently poorly qualified and always hard to secure. The average number of unfilled positions in the gymnasias from 1860–70 was seventy.

The new regulations aimed at the improvement of the teaching body by increasing the salaries, raising the standard of qualification, and by the forma-

tion of a pedagogical council, into whose hands was committed the conduct of the gymnasium.

The four lower classes of the gymnasium were, in 1864, organised into the progymnasium—a preparatory school which usually has a “pension” attached to it. The work of this school is practically the same as that of the town or district school with the addition of languages.

Pending a reorganisation, educationists were sent to Germany to make a study of secondary schools, and the law of 1872 which still regulates Russian secondary education was modelled upon the German system.

The purpose of the classical gymnasium is to prepare students for the university, while that of the Realgymnasium is to train for official or business life or for the higher special schools. An unsuccessful attempt was made in 1881 to secure the admission of the Real students to the scientific departments of the university.

The increase in the number of Real schools has been considerable, but they are still far fewer than the classical.

The secondary schools belong to the Ministry of Public Instruction and are maintained by the state. They are under the charge of the curators and at the head of each is a director assisted by an inspector. The course of the gymnasia covers eight years. The number in each class is limited to forty, but owing to the tremendous popularity of secondary education it is impossible to avoid overcrowding.

The Education of Girls.—In small rural schools the boys and girls receive their education together, but where possible they are taught in separate classes—in some cases the boys go to school one-half of the day, the girls the other half.

Beginning with Catherine's establishment of a convent-school in 1764 various empresses have interested themselves in founding schools for girls—chiefly for daughters of the nobility. The wife of Alexander II. busied herself in organising secondary schools for daughters of the middle classes, and the first girls' gymnasium was opened in 1858. Thereafter, girls' schools sprang up rapidly in all important towns. In 1870 the girls' gymnasia and progymnasia were made uniform with the boys' in government and programme. The course of study comprises religion, Russian language and literature, history, geography, mathematics, domestic economy, needlework, etc. French, German, music and drawing are optional. An additional class for the training of teachers is attached to several gymnasia. Each school is in charge of a directress who is assisted by the district inspector and the director of the boys' gymnasium. A board composed of persons of civil and educational importance in the town has charge of finances, appointments, etc. In 1884 an imperial decree ordered inquiry as to the best means of securing higher education for girls. In the meantime, courses for women have been organised by the university professors, and special courses in medicine are open to them.

Industrial and Technical Education.—Parallel with the elementary and secondary grades are the industrial and technical schools. Prior to 1870 such institutions did not exist, except as special classes in the Real schools, or as isolated village industrial classes. The need of such schools and their independent growth, however, led to an attempt at organisation in 1881 by the Department of Finance. In 1883 the Ministry of Public Instruction took over such technical and industrial schools as already

existed. In 1888 the special classes in the Real schools were abolished and technical and artisan schools opened at the government's expense.

The artisan or industrial schools attempt to train skilled workers in village industries and do not go beyond the elementary grade. The technical schools receive pupils who have passed the elementary schools, and train them to be designers and skilled mechanics.

The Training of Teachers.—From time to time during the first half of the century efforts were made to establish training schools for teachers, but these schools were far too few to be said to form a part of the educational system, and a large percentage of the primary teachers came directly from the district schools.

Since 1872, when a statute was passed regulating them, pedagogical Institutes and Seminaries have increased rapidly. The Institutes train teachers for town and district schools, and in rank and organisation correspond to boys' gymnasia. They possess a partly academic, partly pedagogical course of three years, and each has attached to it for practical training a town school of two classes. The Seminaries train primary teachers. They have a three years' course and a programme similar to that of the Institutes, but within a narrower range. All of these Seminaries have primary schools attached to them.

For secondary teachers there is the Historico-Philological Institute at St. Petersburg for classical training, and most universities have special pedagogical departments.

Higher Education : The Special Schools and Universities.—Most of the superior technical schools come within the care of their respective Ministries, *e.g.*, the Odessa Commercial school under the Ministry

of Finance, the Naval Training schools under the Ministry of the Navy, etc.

First among the technical schools is the St. Petersburg Technological Institute, which gives both theoretical and practical training in drawing, physics, chemistry and in specific trades and manufactures. Other schools there are—of jurisprudence, agriculture, engineering, etc.—all with this aim, that the youth may know the resources of his own country and learn to develop them in accordance with the requirements of his own people. The Russian is no cosmopolitan.

The Universities since 1864.—The statutes of 1863-4 restored in the main the privileges the universities had lost since 1835, with, however, a certain reservation of power by the state, the arbitrary exercise of which has aroused distrust and prevented the growth of loyalty among the students. The universities increased in number, and the grant compared with that of 1835 was more than trebled. But in the years that followed, intellectual progress fell short of the promise. The disturbances, actual or feared, consequent upon the Polish troubles, caused many a clash between students and civil authority. The stormy atmosphere was not conducive to study. Moreover, the lack of competent teachers—the great handicap of the Russian system—was felt most severely at the universities.

When Tolstoi became minister he at once began an inquiry into the needs of the universities and in 1874 a special committee was formed, whose recommendations led to the new laws of 1884. These laws are still in force. Increased power was given to the Curator, who is the Czar's appointee. He is held responsible for all disorders and is intermediary between the university and the higher authority.

An inspector is appointed to assist him, and they, together with the rector and deans (appointed by the Minister at the faculty's suggestion), co-operate in matters of discipline. The standard of admission was raised. Only those who can give evidence of having completed the gymnasial course may become matriculated students, though others may attend lectures.

An elaborate curriculum to which students must adhere, is prepared for each faculty. Promotion from class to class, and preparation for degrees are left to the university staff, but the final examinations since 1863 have been in charge of a state-appointed board. Since 1884 there has been a board of examiners for each faculty. In 1900 there were nine universities, with a roll of 14,105 students, and an annual expenditure of 4,108,045 roubles.

CHAPTER XI.

THE UNITED STATES.

THE Reformation was more far-reaching than at first sight appears. It changed the whole face of Europe, and it gave the world a continent stamped with the best of Europe's ideas. It saved America from monarchy and absolutism. Had not the Puritans of England been forced to leave their native land, settling first in the Netherlands, and then, for conscience' sake, in America, this continent, in all probability, would have been developed politically and socially from the Royalist South rather than from the Puritan North. The Puritans brought with them a narrow and austere religion, it is true, but at the same time they brought a desire for knowledge that was to grow and spread until it culminated in the marvellous development of the United States in the nineteenth century. The men of the Mayflower had more than a desire for knowledge; many of them already had their minds well stored, and were among the most brilliant graduates of Cambridge—friends of Milton and of Hampden.

Naturally, as Virginia was first settled, educational effort began there and the establishment of a college was meditated, but obstacles were in the way, and it was not until the end of the seventeenth century that any educational progress was made in the oldest of the American colonies. In New York, the

Dutch Reform Church founded a school in 1633, and between that date and 1660 the Dutch West Indian Company had sent sixteen teachers to the province of New Amsterdam. It was, however, left for Boston to become the mother of culture for America. The founding of the Public Latin School of Boston was the first great step in the intellectual development of the people of the American continent.

The first attempt, too, at a school system was made in Massachusetts. It grew out of the spirit of the Reformation. Education was necessary if men would escape from "that old deluder Satan," whose desire was "to keep men from the knowledge of the Scriptures." Education in the eyes of the Puritan Fathers made for salvation, and they would compel all citizens to send their children to school. In 1647 the Massachusetts School Law was passed by the Colonial Assembly, making attendance at school compulsory. It contained the following enactments:

"It is therefore orderēd by this Court and authority thereof that every township within this jurisdiction, after the Lord hath increased them to the number of fifty householders, shall then forthwith appoint one within their town to teach all such children as shall resort to him, to write and read; whose wages shall be paid, either by the parents or masters of such children, or by the inhabitants in general, by way of supply, as the major part of those who order the prudentials of the town shall appoint; provided that those who send their children be not oppressed by paying much more than they can have them taught for in the adjoining towns.

"And it is further ordered that where any town shall increase to the number of one hundred families or householders, they shall set up a grammar-school, the master thereof being able to instruct youths so

far as they may be fitted for the university; and if any town neglect the performance hereof, above one year, then every such town shall pay five pounds per annum to the next such school, till they shall perform this order."

Connecticut followed the example of Massachusetts, and, in 1650, the Connecticut Code, constructed along the lines of the Massachusetts Law, came into force. It decreed that the people should not "suffer so much barbarism in any of their families, as not to endeavour to teach, by themselves or others, their children and apprentices, so much learning as may enable them perfectly to read the English tongue, and knowledge of the capital laws, upon penalty of twenty shillings for each neglect therein: also that all masters of families do once a week at least, catechise their children and servants in the grounds and principles of religion, and if any be not able to do so much, that then at the least, they procure such children or apprentices to learn some short, orthodox catechism, without book, that they may be able to answer to the question that shall be propounded to them out of such catechism by their parents or masters, or any of the selectmen when they shall call them to a trial of what they have learned in this time. And further, that all parents and masters do breed and bring up their children and apprentices in some honest, lawful calling, labour, or employment, either in husbandry, or some other trade profitable for themselves and the commonwealth. If they will not, nor can not, train them up in learning to fit them for higher employments: and if any of the selectmen, after admonition by them given to such masters of families shall find them still negligent of their duty, in the particular before mentioned, whereby children and servants become rude, stub-

born and unruly, the said selectmen with the help of two magistrates, shall take such children or apprentices from them and place them with some masters—boys till they come to twenty-one, and girls to eighteen years of age complete—which will more strictly look unto, and force them to submit unto government, according to the rules of this order, if by fair means and former instruction they will not be drawn into it.”

Some of the other States were early in their history subject to the law of Massachusetts, but for the most part there was very little attempt at systematic education before the days of the Revolution.

During the seventeenth and eighteenth centuries teaching was, on the whole, poor, and teachers poorly paid, although a few brilliant pedagogues, such as Ezekiel Cheever, who taught for seventy years, did excellent work.

To leaven the whole educational life of the colonies higher education was necessary, and this came with the establishment of Harvard “Colledge.”

Six years after the settlement of Boston the Court voted the sum of £400 towards a school or college. Since the beginning, however, of the intellectual life of this continent, more has been done by individual effort and generosity than by State aid. So was it at this time. One John Harvard, a graduate of Emmanuel College, Cambridge, came to America. He was of humble origin, but was a finished scholar with excellent taste, and an enthusiasm for education. He was to have but a short life in the Colony, but during the year that was left to him his sweet and godly character made a deep impression upon his fellow Puritans. On his death he left one-half of his estate, in all about £1,700, “towards the erecting of a colledge.” Along with this considerable sum, for

that time, he bequeathed to the proposed college all his library. It contained the classics and many of the mediæval masters, and served as the nucleus for the present splendid library that is installed in Harvard University. His example was followed by others, and Harvard College, conceived in 1637, was firmly based, and was to continue from the beginning the greatest educational force on this continent, and from its halls were to spring and gather force the ideas that made the giants of the Revolution.

In the South the College of William and Mary came into existence in 1693, after years of effort, and through the liberality of the wealthy colony was, from the commencement, a rich institution. Further attempts in the seventeenth century were made at establishing colleges in the North, but Harvard was found to be sufficient for the education of New England. As early as 1647 a lot was set apart for the establishment of a college in the New Haven Colony, but Yale College was not founded until 1700. The charter was obtained in 1701 and the Rev. Abraham Pierson was chosen the first rector. It began with one student, and at first had no fixed abode. It had as its headquarters for a time, Killingworth, Milford, and Saybrook, but in 1718 was permanently located at New Haven. It was named after Elihu Yale, an able administrator and scholar who contributed liberally to it in both money and books.

Before the eighteenth century closed twenty-four colleges in all had been established in the United States. Four of these were founded while the war was in progress, and twelve immediately after it.

In the beginning the chief idea in the minds of those establishing educational institutions was religious enlightenment, but this seems to have to some

extent given way to the idea of general culture, and, out of fifteen established after the Revolution between the years 1782 and 1796, ten were non-sectarian.

The early rulers of the Republic feared the influences of foreign educational institutions on the minds of American youths and were anxious to establish a great national university at the seat of the general government where a thoroughly broad and advanced education could be obtained. It was hoped that such an institution would be a unifier of the nation. The young men brought together in this way from all the States of the Union would tend to carry back to their States a national spirit. With this hope Washington bequeathed fifty shares in the Potomac Company towards the endowment of such a University within the limits of the District of Columbia.

The general government has been liberal with regard to education, and between the time of the Revolutionary War and the time of the Civil War had contributed in all 140,000,000 acres of land for educational purposes.

The States, too, have been liberal; they have, indeed, rivalled each other in the establishment of institutions for higher education, and in the States and Territories there are no fewer than thirty-three State-endowed colleges. These institutions are, for the most part, magnificently equipped.

Besides the efforts of the Federal and State governments in the direction of education, private individuals have endowed educational institutions with a munificence never before known in the history of the world. Many millions have been donated, and from the Atlantic to the Pacific, and from Canada to the Gulf of Mexico there are, in almost every

State, magnificent colleges, richly endowed by private citizens of the United States; and at the opening of the twentieth century the great work continues with increasing strength.

In the universities of the United States an excellent classical education can be obtained; but, thoroughly imbued with the modern spirit, they lay greater stress on the natural sciences, and on history and political science. Many of the teachers in these institutions are among the ablest in the world in their departments, and it is now generally recognised that the young men and women of the United States can receive as finished an education in many important subjects in their own country as is given in the Universities of the Continent or England.

If the States have done much in the direction of university education, they have, although the movement has been somewhat later, done equally good work in the establishment, as a part of their public school system, of high schools—those “people’s colleges” that are now, in every community, disseminating culture, fitting young men and women for the teaching profession, and preparing the more ambitious for the halls of the universities.

Boston took the lead in secondary education, and the Boston Latin School, already referred to, is the oldest High School in the United States. In 1821 the English High School was founded in the same city, and the work of the typical modern institution of that sort was at once begun; the modern languages, mathematics, and the sciences now received a prominent place on the curriculum. The other cities were slow to follow the example of Boston; but Philadelphia, in 1837, Baltimore, in 1839, Cincinnati, in 1847, New York, in 1849, St. Louis, in 1853, Chicago, in 1856, Detroit, in 1858, all had efficient

schools for secondary education; and before the outbreak of the Civil War all of the New England States and a number of the other States had seen the need of establishing somewhat similar schools to the English High School at Boston. When the century closed there was scarcely a city of any magnitude without its well-equipped high school maintained at the public expense. Of all institutions from an educational point of view the high school is the most important, and the great majority of business and public men owe their success in life, their power to grapple with business problems, and questions of State, to the training received in these institutions.

Primary education has of recent years received the closest attention of the educationists. The first primary schools were known as charitable schools, and these, as might have been expected, were a failure. The teachers, as was at that time the case in the Old World, were often intemperate adventurers, not infrequently indentured servants or transported felons. In later years these primary schools were taught by youths who had but little interest in their work, and merely used teaching as a stepping-stone to the professions. The common-school text-books were, for the most part, the Bible and catechism. The most rudimentary education was not always given in these schools and had to be done at the home.

At the opening of the nineteenth century there were no public primary schools in the United States, and children were only admitted to the "grammar schools" after qualifying by study at home or in some private school. New York City took the first step in advance, and in 1828 the "Infant School Society" opened an elementary school, which, by 1832, was recognised as a part of the school system

of the city. The movement spread, and by the middle of the century the people of the United States had fairly good primary schools and were prepared to consider the work of the kindergarten.

To Mrs. Carl Schurz is due the credit of being the pioneer in kindergarten work in America. She had studied the work under Froebel in Hamburg, and when she settled in Watertown, Wisconsin, established, in 1855, a school in conformity with Froebel's system. Her work attracted the attention of Miss Elizabeth Peabody. As a result Miss Peabody established her celebrated school at Boston, and after some years' experience in kindergarten work, went to Europe in 1867 and studied in Hamburg, and on her return to America began her kindergarten work with renewed ardour. She was not alone in the field. The work was ably taken up by such women as Mrs. Kriege, Miss Boelte, Miss Susan E. Blow, Mrs. Quincy A. Shaw.

Since the establishment of Rensselaer School in New York in 1824, technological education has received much attention. The United States is essentially a practical nation, and all through the nineteenth century results have been looked for from the money expended in education. The question has ever been asked not so much how does education brighten the life of the individual and create higher ideals, but how will education increase the wealth of the nation. To this end manual-labour schools, academies giving a training for engineering and mechanical pursuits, schools of mining and metallurgy, of applied science, of domestic science, etc., have been established. The result has been to increase the productiveness of the American workman, and to improve the character of his work, till the United States

is second to no country in manufactures and is winning her way into the markets of the Old World.

There is another phase of education in which the general government, the States, and individual citizens have all joined—the education of the unfortunate and criminal classes. The vital principles of Christianity have taken firmer hold of this continent than of the nations in the Old World, and as a result there is more private and public unselfishness, and this manifests itself in the altruistic spirit displayed in the establishment of educational and charitable institutions.

There are now in the United States for the education of deaf mutes, over sixty institutions; for the education of the blind, over thirty; for the education of the feeble-minded, about twenty schools and homes with over 4,000 inmates.

During the latter part of the nineteenth century it gradually came to be recognised that punishment should not be vindictive but educative, and reformatories were established where young offenders might have another chance in life—a chance to have their crooked souls made straight. There are now in the United States over sixty reformatories and numerous allied institutions for orphans and vagrant children.

The Indians, too, are now from an educational point of view receiving considerable attention, and there are between 15,000 and 20,000 receiving instruction, and the educative endeavour has been carried to far Alaska with good results.

Education in the South has ever been in a much more backward condition than in the North. The

character of the people, their habits of life, their institutions, and the sharp line drawn between the upper and lower classes prevented the general spread of learning. Indeed, those in authority for the most part deemed it best that the people as a whole should be kept in ignorance and, with Attorney-General Seymour of Virginia, thought that the chief end of the Virginians was to "make tobacco" or, with Governor Berkeley, believed that education was the fruitful seed of heresy and rebellion.

Before the Revolutionary War there was no school system in Georgia, South Carolina, or Virginia. There were some good private and parochial schools, and when these could not give the education desired the wealthier Southerners sent their children to the schools in the North or to England. It was not until after the Revolutionary War that the South began to pay serious attention to education.

In the last decade of the eighteenth century, a movement began in Georgia for the diffusion of knowledge, and an effort was made towards the establishment of a high-grade school in each county. The work was slow and crude at first, but in 1821 it had so far progressed that the sum of \$200,000 was appropriated for the maintenance of these schools. These did not reach the mass of the people, however, and in 1823 another \$200,000 was voted for the support of elementary schools. Virginia followed in the wake of Georgia and in 1810 established a fund for educational purposes. About 1820 Kentucky did likewise, and soon Louisiana, Tennessee, and Mississippi made appropriations of land for schools. Alabama, Delaware, Georgia, Kentucky, Missouri, North Carolina and South Carolina applied their

step in advance of her sister States when, in 1823, she appointed a State school superintendent. Before the middle of the century a number of the Southern States were devoting to educational purposes from one-quarter to three-quarters of a million dollars annually, and fairly good educational systems were established in such centres of population as Baltimore, St. Louis, and Louisville. But on the whole the Southerners were indifferent to free education. This is not to be wondered at. Free education is only appreciated in countries where there is a large middle class being constantly recruited from the lower class of society. In the South there was practically no middle class before the Civil War. Slavery prevented this. There were the slaves, "the poor whites," and the rich planters and slave-owners. Exclusiveness was the order of the day, and the wealthy planters gave their children their elementary education at the hands of tutors in their homes.

The anti-slavery movement in the North, followed by the Civil War, was to change the whole aspect of affairs. The souls of the slaves were precious to the Puritans of New England, and in 1861 the American Missionary Association opened a school for colored youths at Fortress Monroe. The devastation wrought by the war left the South in poverty, and a duty was laid upon those who had freed the slaves. They did not shirk it. Work began even while the war was in progress, and before its close the Freedmen's Aid Society had 600 teachers in the field and thousands of pupils. It continued, until 1869, to establish schools and locate teachers, and spent for educational purposes in all nearly \$1,500,000.

Government had its duty likewise to perform to the vanquished South, and even while the final stage of the war was in progress about Richmond, Con-

character of the people, their habits of life, their institutions, and the sharp line drawn between the upper and lower classes prevented the general spread of learning. Indeed, those in authority for the most part deemed it best that the people as a whole should be kept in ignorance and, with Attorney-General Seymour of Virginia, thought that the chief end of the Virginians was to "make tobacco" or, with Governor Berkeley, believed that education was the fruitful seed of heresy and rebellion.

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was given to industrial institutions, and seven years later a tremendous impetus was given to this kind of education by the bequest of \$1,000,000 by John F. Slater for the education of the freedmen in the South. This money was chiefly for industrial and medical training. So the movement grew and in Central Tennessee College, in Claflin University, and in Clark University, departments were established giving industrial training to young men and domestic science to girls. The greatest boon of the Civil War was the opening of the South to the educational ideas and methods of the North. Mediævalism and feudalism gave way to nineteenth century civilisation and culture. So much has been done that in some few districts the race line has been partly broken down, and coloured pupils and white study in the same institutions.

What a noble work has been done in the South is evident from the fact that in sixteen Southern States the number of pupils enrolled in the years between 1872 and 1885 increased from 1,639,000 to 3,888,000. Many of the negroes have shown considerable mental power, and several have attained a national reputation as scholars, orators, and literateurs. In Tuskegee Normal and Industrial School, where from 300 to 400 students are in attendance, the entire faculty of twenty teachers are coloured.

Although the South has not yet attained the high standard of the North in education, it is going forward rapidly, and the sixteen States are now expending between \$20,000,000 and \$30,000,000 annually. This is a remarkable showing when it is considered that the devastating Civil War left it in poverty, and forced upon it an entire change in aims and ideas. It is worthy to note that in Johns Hopkins

University she has an institution which, in some of its departments, is a rival of Harvard University, Oxford, and Cambridge, and the best German institutions of like kind.

While much was done to advance the education of men in the United States during the nineteenth century, vastly more, in comparison with other countries, was done for the enlightenment of women. Indeed, before the opening of the century practically no provision was made in any part of the New World for the education of women. But at its close their opportunities were as great as man's; woman was no longer looked upon as man's intellectual inferior, she was no longer treated by man as a graceful plaything or useful drudge, to use the language of James Bryce, but was considered his equal.

In the eighteenth century educational effort on behalf of woman was, until after the Revolution, confined almost exclusively to the Quakers of Pennsylvania. The Penn Charter School of Philadelphia was opened to both sexes, and the Moravians about the middle of the century established a school for girls at Bethlehem. With the Revolution there was a general broadening of the mind of man, and one of its manifestations was a yearning after higher education. About this time a female Academy was founded in Philadelphia, and, in the critical period of American history while the Constitution was being worked out, New England began to give attention to the education of her daughters. In the year 1785 Dr. Dwight's Young Ladies' Academy was established at Greenfield, Connecticut, and four years later the Medford School, near Boston, was founded.

It is true that during the entire eighteenth century some little attention was given to the education of the girls of Boston, but it was of a most tenta-

tive character, and was confined to the "writing-schools," in which they received instructions, not along with their brothers, but between the regular sessions.

The modern movement for the education of girls in New England began about 1787, when Mr. Caleb Bingham opened in Boston a school for girls, in which they were taught reading, spelling, arithmetic, and English grammar. His school was very soon overcrowded with pupils, and the need of "reading-schools" for girls was recognised. They were established, but the girls were still at a disadvantage, and received instruction but six months in the year. In 1826 an effort was made to establish a high school for girls, but the city felt itself too poor to give a higher education to both sexes; and it was not until the middle of the century that further effort was put forth in this direction. Philadelphia, the pioneer city in the education of women in America, in 1840 opened a girls' high and normal school, and in 1843 Providence followed with a high school for girls and boys. Boston, seeing the great need of women teachers for the elementary schools, in 1852, founded a girls' high school. This institution, as well as the Philadelphia high school, was largely devoted to the training of teachers. The movement was now well under way, however, and before the nineteenth century closed high schools for the co-education of the sexes and excellent ladies' academies were established in every State from Massachusetts to California.

The progress made was largely due to the energy and ability of four unselfish women: the work done by Mrs. Emma Willard in Vermont and New York, by Miss Catherine E. Beecher in Connecticut and Ohio, by Mary Lyon in Massachusetts, and Miss

Grant in New Hampshire, was the true basis for the wonderful development of the education of women in the United States.

Mrs. Willard began her work in the opening decade of the century by establishing a school for young ladies at Middlebury, Vermont. In 1819 she left Vermont and began work at Waterford, New York, and in 1821 succeeded in founding the Troy Female Seminary. She was an able writer on educational problems and in the interests of her calling twice visited Europe—first in 1830, and again in 1853, when the educational conference met in London.

Miss Beecher began her work in 1822 in Connecticut, and ten years later settled in Cincinnati, where she opened a Seminary. Her great work, however, was done on behalf of education in the outlying parts of the United States, and she did much to send trained teachers to the Western schools, to the Territories, and to the South.

Mary Lyon was the foundress of Mount Holyoke Female Seminary, South Hadley, Massachusetts. This institution was incorporated in 1836, and in twenty years after its establishment had furnished 724 teachers.

Among other institutions founded in the earlier part of the century which gave an excellent education to girls were the Wesleyan Seminary and Female College at Kentshill, Maine, and another at Granville, Ohio. Elmira Female College was founded in 1855, and in it an effort was made to give the students as thorough a training as any to be obtained in the colleges for men.

The culminating point in female education, however, was not reached until after the Civil War. Vassar College, although conceived in 1861, did not

begin work until 1866. This institution has an ideal situation near Poughkeepsie on the Hudson. It has a fine equipment, an excellent library and gymnasium, and a staff that compares favourably with any college in America. It is noteworthy that the most celebrated of its teachers was Dr. Maria Mitchell, the astronomer and mathematician. Wellesley College, Smith College, and Bryn-Mawr all maintain an equally high standing.

Of these institutions James Bryce says in his *The American Commonwealth*: "I have visited the two former, and was much impressed by the earnestness and zeal for learning by which both the professors and the students seemed to be inspired, as well as by the high level of the teaching given. They have happily escaped the temptation to which some similar institutions in England seem to yield, of making everything turn upon degree examinations."

How rapidly the colleges for women have grown can be seen from the educational report for 1889-90. There were then 179 such institutions in the United States, with 577 male and 1,648 female instructors, and 24,851 students.

It was some time before conservative minds could become reconciled to co-education in the colleges, but these prejudices have now been happily overcome, and there are but few institutions which do not admit women to their halls on the same footing as men. Indeed, so advanced have ideas become that not a few women are studying in the theological faculties, in the medical halls, and even in the legal departments.

It is only necessary to look at the figures given by the educational report of 1889-90 to see how important woman has become as an educational factor in the United States. In that year there were 125,

602 men teachers, and 238,333 women. In the older and more cultured States, such as Massachusetts, women vastly predominated over men in the schools, and were generally recognised as more efficient teachers, at any rate in the elementary work.

So far the work done by towns, cities, States and individuals in education has been chiefly under consideration. There is, however, another far-reaching influence at work in the United States—the Federal government. It has, as has been already pointed out, the charge of the education of the Indians in the West, and the inhabitants of Alaska; but besides this it does other most useful work. The influence of the general government may be dated from March 16, 1867, when the Honourable Henry Barnard was appointed First United States Commissioner of Education. He was at the head of what was at first known as a Department of the Interior. This was afterwards made a Bureau of the Interior. The Bureau has carefully watched over the general progress of education, and has kept the country informed with regard to the progress made in the organisation and management of schools and school systems and methods of teaching.

The work done by the United States Coast Survey, by the Geographical and Geological Survey, by the Signal Service and the Naval Expeditions to the different parts of the earth in the interests of science and commerce, and the exhaustive reports published in these connections have had an incalculable educational influence.

Up to the present time the prosperity of the United States has been greatly due to its agricultural productions. The government has not been unmindful of the agricultural interests of the nation, and has established in all some fifty schools, in which, while

special attention is given to agricultural pursuits, a good general education can be obtained.

Besides this the function of the Bureau of Agriculture is "to acquire and diffuse among the people of the United States useful information on subjects connected with agriculture, in the most general and comprehensive sense of the word, and to procure, propagate, and distribute among the people new and valuable seeds." It likewise gives information on entomology, on ornithology, on the diseases of animals, etc.

While military education has not received the same attention that it has in European countries, good work has been done at the Military Academy at West Point, which was established in 1802. As the result of the work in this institution there were in both the armies of the South and the North a number of excellent officers at the outbreak of the Civil War. In 1845 a Naval School was established at Annapolis, Maryland, and in 1850 it became the United States Naval Academy. In 1884 there was established at Newport a naval war college for the graduate instruction for officers of the Navy. The character of the work done at these institutions was well shown at the Battles of Manila Bay and Santiago.

As a result of this widespread education in every direction, the United States is advancing by leaps and bounds. In no country is knowledge more widely diffused, and in no country have the workmen greater skill, the business men greater capacity, and the leaders of the people greater breadth, or wider and more accurate information.

character of the people, their habits of life, their institutions, and the sharp line drawn between the upper and lower classes prevented the general spread of learning. Indeed, those in authority for the most part deemed it best that the people as a whole should be kept in ignorance and, with Attorney-General Seymour of Virginia, thought that the chief end of the Virginians was to "make tobacco" or, with Governor Berkeley, believed that education was the fruitful seed of heresy and rebellion.

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had this not been true, what there was of literature and science was inaccessible to the lay mind, locked up as it was in the sacred language, the dead Sanskrit.

Two external influences in a measure offset the exclusiveness of Hinduism, namely Buddhism and Mahometanism. Buddhism had arisen as a reaction against the corruption and spiritless ceremonial of Hinduism, but as a religious force had vanished from India in the sixth century, not long before the advent of Mahometanism. It found a retreat in Ceylon and Burmah, where the work of the Buddhist monks among the people raised indigenous education to its highest level in all India.

Although for more than ten centuries Mahometanism held sway over Indian politics, and although one-fifth of the population are still of that faith, the conquered race shows but little trace of Mahometan influence. Hinduism was all system, Mahometanism had scarcely any, the two creeds could not coalesce, the social customs favoured no intermingling of the people, so Mahometanism has remained as at first, a foreign element.

Mahometanism has everywhere been characterised by the excellence of its schools, and by an interest in learning extending even to the lower ranks of its adherents. To read the Koran was a religious duty. In the homes of the middle classes the master of the house "taught his wife in order that she might teach his children." The Mahometan schools were, broadly speaking, of two classes, the "colleges" and "schools." The "colleges" taught their advanced mathematics, astronomy, metaphysics, and medicine, admitting none but Mahometan students. They existed side by side with Hindu colleges, yet there was no exchange of thought. In the "schools," however,

nearly one-half the pupils were Hindus. Persian was the language of the Hindu courts until 1835, and the best training in Persian was to be had in the Mahometan schools.

The indigenous Hindu schools were of three classes: the schools of the Brahman caste, the "tols" or schools of learning, and the elementary or village schools. Of the first, little need be said more than that the loyalty of this caste of scholars time and again preserved their learning from extinction.

The second class, the "tols," corresponds distantly to the "secondary" schools of Europe. While nominally open to all classes of society, they were practically confined to the sons of Brahmans, and were quite distinct from the elementary grades. While comprising poetry, astronomy, rhetoric, law, and medicine, their course was chiefly notable for the exhaustive study of the grammar and structure of the Sanskrit language, and an elaborate logic resembling that of the mediæval schoolmen. The course commonly extended over twenty years, and the men of thirty years of age left college with a vast deal of learning, but with no conception of the practical issues of life. The masters were Brahmans of eminent scholarship and high character, devoted to a noble ideal of scholastic life, but in no wise men of the world.

The elementary schools were attended by sons of tradesmen and petty land-holders. Children of castes lower than these were without education. These village schools were very primitive in character. There were no books or manuscripts. The younger pupils sat on the floor of the shed where the master had collected his scholars, and traced characters in the sand with their fingers. At the end of five years they could calculate and had some skill in

composition. The teachers were meagrely paid by the gifts of their scholars and seem to have been held in little esteem.

Two centuries before the opening of the nineteenth century a new and most potent factor in education appeared in the person of the Christian missionary. Year after year Jesuits and Protestants strove courageously against the prejudice and distrust of the natives, continually hampered by the apathy of their own countrymen. By the beginning of the nineteenth century, however, at least two important results had been achieved by the English missionaries. Several thousand students were in attendance at the schools attached to the missions, and these schools, although tentative in character and ill-supported, were to furnish the pattern for the present state system. As a second and even more important result, the missionaries abroad and their friends at home forced the government to give heed to the educational needs of India.

At intervals of twenty years the charter of the East India Company was put into the hands of the home government for renewal. In 1793, an attempt to insert an educational clause failed, but renewed efforts brought success in 1813, and parliament devoted an annual grant of a lakh of rupees to the founding and maintaining of schools and the "encouraging of learned natives." No satisfactory conduct of affairs was arrived at, however, until 1823, when the Committee of Public Instruction was appointed. This body was to have charge of expenditure and of the educational institutions then under government control.

Official sympathy was in favour of retaining the oriental matter and method in education. "The encouraging of learned natives" was interpreted to

mean the fostering of higher Hindu schools, the teaching of the Persian and Sanskrit languages, and the printing of Sanskrit books. The missionary schools, on the other hand, were, from the nature of things, no friends of the old learning, which was inseparable from the heathen religion. They made use of the vernacular as a means of disseminating Christian knowledge, and to this end excellent literary work was done in the native dialects, particularly in Bengali. True, there were not many missionary schools of secondary rank, but such as there were, notably Dr. Duff's Free Kirk College in Calcutta, favoured the use of English instead of Sanskrit, as a medium of instruction. The success of Dr. Duff's College and its popularity with the Hindus themselves were a strong argument on the side of the Anglicists in the controversy of 1833-5.

The rivalry between Eastern and Western learning, or more particularly between the Sanskrit and English languages, which had been growing up in recent years, was brought to a crisis over the disposal of the added grant of 1833. The Orientalists claimed that on the strength of the educational clause in the charter of 1813, the money should be used to promote the Arabic and Sanskrit learning. They argued, too, that it was unjust to foist upon an already civilised people a foreign language and learning. This argument had in it a large share of scholarly and sentimental prejudice. On the other hand, successful experiment supported the views of the Anglicists. Both sides agreed that the subject-matter of the Sanskrit books was in itself of little practical value, and that European literature and science must be taught. English, said the Anglicists, was a direct step towards this, and, besides, was a far simpler language than Sanskrit. The Hindus themselves, in-

different to their ancient learning in the face of the material advantages of an English education, sought the English classes in their own schools or flocked to Dr. Duff's College. The Sanskrit translations of modern works rotted on the shelves, the students preferred the original English. Was the student of Sanskrit the sole heir to the title of "learned native" and hence to the grant?

In 1835 Lord Macaulay, who had been appointed President of the Committee, dealt the death-blow to Sanskrit education. His famous *Minute* was put into effect by a proclamation indicating that the government grant as well as government effort should be employed in promoting a knowledge of European literature and science through the medium of the English tongue. The aim "should not have been to teach Hindu learning or Mahometan learning, but useful learning." Perhaps nothing in the whole century has been so potent in determining the character of education in India.

Naturally, the direct result of the *Minute* was a rapid increase in the number of English schools and in the number of native pupils. Its influence was evident throughout the rural districts, too, in the demand for teachers and for English books. Interest was awakened in the lower grades of education as well as in the colleges. All efforts were, however, experimental in character. Each province in its own way made an attempt to formulate some sort of system of education for the masses of the people.

The remissness of the central authority up to this time contrasted strongly with the energy of the missionaries. At the end of the first half of the century the mission schools, irregular and precarious as their condition was, had under their instruction

almost four times as many pupils as the government schools, and were steadily progressing.

Conditions had seemed to favour the promotion of higher education on the part of the government, to the neglect of elementary education. There was an ever-present need of properly trained civil-servants, hence the government encouraged the schools that supplied the training. The sympathies, too, of the educated classes had hitherto been monopolised by the colleges and higher schools. And even when need for popular education had won recognition, there appeared no practicable plan, no available machinery for its administration. But now, a change had come.

In 1853, the time again came around for the renewal of the Charter of the Company, and the greatest interest centred about the educational clause. The Lords' Committee had been at pains to secure evidence from men of long and intimate acquaintance with educational affairs in India, with the result that the government took upon itself the administration of education. The future policy of the British government in this regard was announced in the *Great Despatch*, framed by Sir Charles Wood (afterwards Lord Hastings), which is often called the Magna Charta of education in India. A brief enumeration of its chief features must here suffice. (1) Public instruction was constituted a department of administration in each province, in charge of a director and a staff of inspectors. (2) Three universities were to be founded (Calcutta, Madras, Bombay). (3) Such schools and colleges as were then receiving government support were to be maintained, but any unnecessary increase in their number was to be discouraged. (4) New English-teaching schools were established, also institutions for the training of teachers. (5) A system of grants-in-aid was introduced.

Great stress was laid upon the promotion of elementary education, and in accordance with British practice much was left to local initiative. This is exemplified in the grants-in-aid system. These grants were given under several heads, as salary, results, etc., to such schools as were under government inspection and complied with certain requirements. The aim of the grants-in-aid is thus summed up: "The discontinuance of any system of general education entirely provided by government is anticipated with the gradual advance of the system of grants-in-aid, but the progress of education is not to be checked in the slightest degree by the abandonment of a single school to probable decay."

This *Great Despatch*, with a few subsequent modifications, forms the basis of the present system. Five years later a recommendation was made to the effect that, instead of requiring contributions from the people for the vernacular and indigenous schools, the government should take them directly in charge. All subsequent suggestions and intimations repeat the conviction that the government must do its utmost for the maintenance and promotion of elementary education.

The system of education thus organised, may be considered under four headings: (1) the universities and colleges; (2) the secondary schools; (3) the primary (or elementary) schools; (4) special schools.

(1) The universities are examining bodies after the pattern of the University of London. They grant degrees in Arts, Law, Medicine, and Engineering, after examinations of their own regulating, but all the teaching is done by the colleges. The colleges are in reality under the control of the universities,

inasmuch as the universities have power to grant or refuse affiliation.

(2) Secondary education extends as high as matriculation into the university. The lower limit is not easily fixed, for the schools vary greatly in organisation. The secondary schools are classified as *High* and *Middle* schools. The "Middle School Examination" constitutes the division between these two. These Middle schools are distinguished also as *English* or *Vernacular*, according to the medium of instruction.

(3) Primary schools are divided into *Upper* and *Lower*. The course was to include reading, the vernacular, writing, and a little elementary arithmetic. In some districts the Upper Primary added English, and history, geography or physics. In this primary category, too, we may consider the indigenous schools. From the time that English education really began to gain a foothold, the history of the indigenous schools is one of slow but sure decay—slow because all Indian institutions are very tenacious of life, sure because on the side of the government schools were trained teachers, sure support, better equipment, and the absence of caste distinction. Wherever possible it has been the policy of the administration to absorb the native schools into the state system.

(4) Special schools. (a) When the *Despatch* was framed, it was intended that in process of time the teachers in all grades of schools should be duly certificated, and to this end *normal schools* were established. But for many years these schools were too few, and the training inadequate to the needs even of the lower grades of schools. Teachers in the secondary schools had no training whatever. (b) *Technical Schools*. There was no system of industrial and technical training in India. There were schools

of engineering, of medicine, etc., but these differed from the colleges in not preparing for a degree.

Education is under provincial administration. The provincial governments apportion the expenditure of provincial revenues and regulate the rates of taxation for purposes of education, hence the financial systems vary in the different provinces. Generally speaking, however, the sources of revenue are these—imperial grants, provincial revenues, local and municipal funds, fees, and such other sources as private donations. Local funds are largely in the hands of district Boards, and it happens sometimes that school moneys are encroached upon to meet the demands of “public works.”

Such was the system which was laid down in the *Great Despatch*. The structure did not spring up in a day; it was slowly fitted together piece by piece. But the plan was in advance of those whose duty it was to carry it out, hence much was lacking in the result. No principle in the *Great Despatch* had been more strongly emphasised than that of fostering primary education, and yet it was shown that while the number of children of school age had increased at an average rate of 200,000 a year, the number in attendance increased only 70,000 a year. The official and scholarly preference for higher schools could not be overcome in one decade, or two, or even in three. In spite of the instruction that there should be no increase in the number of colleges, and that secondary education should be left to the system of grants-in-aid, it was found in 1881–2 that a large share of the revenues belonging to the middle and primary schools was being applied to higher education, and colleges were established where a missionary institution was already doing the work.

Foremost in the agitation for reform were the mis-

sionaries and their friends. At length, in 1882, the government of India recognised the movement by appointing an *Education Commission* to inquire into the state of public instruction. On this Commission were enrolled representatives of native and missionary, as well as public interests. Its instructions were explicit and comprehensive, but again the most emphatic was to inquire into "the present state of elementary education throughout the Empire, and the means by which this can, everywhere, be extended and improved." The *Report*, drawn up after months of inquiry and deliberation, contains an elaborate review of Indian education and makes recommendations concerning all grades of schools.

(a) Chief among the suggestions regarding the colleges were these: (1) "that the rate of aid to each college be determined by the strength of the staff, the expenditure on its maintenance, the efficiency of the institution, and the wants of the locality;" and (2) that native graduates should more frequently be appointed to positions in the state colleges.

(b) In recommending that secondary schools be established by the state on the system of grants-in-aid, the Commission merely repeated the policy of the framers of the *Despatch*. They defined the relations of the state to secondary and primary schools by saying that the former should be provided only where local co-operation warranted it, but that the latter should be provided "without regard to the existence of local co-operation." They urged the division of the secondary schools into two sorts, one to train those who looked to a University course, and the other to meet the needs of those who, looking to a commercial or non-literary career, would not pass beyond the secondary grade.

(c) In pursuance of their instructions, the Com-

mission naturally gave great attention to primary education. The ways and means suggested in the *Great Despatch* had been necessarily experimental in character, and statistics showed that they succeeded badly. The Commission discovered the fault not only in the inadequate provision for the training of teachers, but also in the false conception of the place of primary education in the general system. Primary education should, said they, be regarded as an end in itself, not as a preparation for the collegiate course, and should be arranged to meet the needs of those whose education necessarily ended with the primary school. Moreover, it should "possess an almost exclusive claim on local funds set apart for education" as well as on provincial revenues. They organised, too, a uniform course of studies and standard of examinations, and introduced the method of payment-by-results. And they went farther than this. Indigenous schools, provided they "fulfilled any purpose of secular education whatever," were to receive assistance, and their teachers were to be encouraged to obtain better education.

Another division of the Report deals with the system of Local Boards. These Boards had for some time been in existence, their scope varying greatly according to the locality. Their conduct was now to be regulated by the government of each province, and all primary schools were to be placed under their control with such others as the government deemed proper.

These measures undoubtedly gave a new impulse to education, especially to the primary grade, but in the years that followed progress was still far too slow. An investigation made upon the basis of the *Quinquennial Report of 1897* found three chief causes for complaint, and these resolve themselves into the failure to carry into effect the recommendations of

the Commission of 1882. There was still a diversion of public funds to higher education, which should have gone to primary. In 1897, only thirty-one per cent. of the total expenditure went to primary schools. Again, the secondary schools were still organised to train only for the colleges, thus limiting the range of pupils. A third cause for complaint was the lack of proper inspection and proper training of teachers.

A word may be said here regarding the education of girls. This important matter has been from its very beginning the especial charge of the missionaries. When the government began to interest itself in the question, there were already 13,000 girls in mission schools. In 1835, the system of Zenana Missions was introduced, whereby English women went from house to house to give instruction to Hindu women. This department of missionary enterprise has grown apace, receiving occasional aid from the state. Aided girls' schools have been established from time to time, but, compared with that of boys, the education of girls has received little attention. The practice of co-education in the primary schools has grown very common, and it is estimated that about forty per cent. of the girls under instruction are in mixed schools. In 1897, the proportion of girls at school to girls of school-going age was 2.34 per cent. Numerically considered, progress has been exceedingly slow, but in view of existing social conditions and native prejudice, it is not at all discouraging. It would be idle to attempt to say what influence this small beginning may have upon the future of India.

Rate of progress is by no means always a true gauge of the effort put forth in the matter of education. In India, a land with fixed customs and ancient civilisation, one has first to consider the tre-

mendous disproportion of Europeans to natives, where, amid a population of almost 300,000,000, the former number only about .09 per cent. Moreover, among this .09 per cent. only a small fraction have been interested in the work of education. The policy, too, of the state has not been of the sort to lead to quick results; it has tended rather to encourage the people at large to assume gradually the responsibility of education, than to compel a rapid organisation under a centralised authority.

With regard to the higher training of the youth of India, its character and results, anxious questions present themselves. Without doubt the efficiency of the civil service has been immeasurably advanced by the work of the colleges. But on the other hand, there are not lacking those who say that for the native graduates who do not enter government employment, higher education of the present sort is a misfortune in that it unfits them for any other career.

Modern tendencies are against the combining of religious training with a state system of education. This is particularly true of a country like India, where so many conflicting sects, both native and Christian, would make a union of religious and secular education either chaos or tyranny. But what if all religious and moral training is excluded? Western education has gone far towards destroying in the native his old faith in the infallibility of his superstitions, of his moral and social code. If, then, we subvert the old, and furnish no new moral and religious standards, the Hindu is left to evolve a conscience as best he may.

CHAPTER XIII.

CAPE COLONY.

IN this matter of national education the British colonies present complex and difficult problems. In no colony are the problems more complex and difficult than at the Cape. This may be due to the history of the South African colony. As early as 1652 the Dutch East India Company established Dutch settlements at Table Bay. About the end of the seventeenth century a few hundred Huguenots sought an exile among these crude settlers, bringing with them, no doubt, the culture, tolerance, and sturdy independence of French Protestants. Distant as it was the colony was dragged into the Revolutionary War. Taken by the English in 1795, it was returned to Holland in 1802, to be retaken in 1806, and in recognition of its importance in the India trade, retained. Native wars, drouth, epidemics, racial and economic difficulties made growth impossible before the middle of the nineteenth century. Since 1870 modern land-hunger, with the opening up of the hinterland and the development of the great mining interests, has turned a tide of British, German, and Asiatic settlers towards South Africa.

But the complexity of the educational problem is not due wholly to history. The life of the European in South Africa developed a particular type of colonist. Severed by distance and an out-of-the-way sit-

uation from the greater currents of thought and feeling of his motherland, the settler became non-progressive and inert, but intensely patriotic. With the steady movement inland and upland from the fertile coast to the vast and arid interior, he turned herdsman, living a lonely, half-nomadic and patriarchal life among his slaves and his cattle. His ceaseless struggle with his bleak environment, and his isolation left him earnest, self-reliant, strenuously religious, but at the same time impatient of restraint, suspicious, stubborn, and perversely ignorant.

Apart from these dwellers in the high and dry interior, the inhabitants of the seaport towns and of the mining districts represent a later colonisation movement. They remain in touch with the wider interests of the Old World, and have thus become more progressive and more enlightened factors in the social and commercial life in the New.

Between the Dutch and English tempers there is naturally a great gulf fixed. The fact that the herdsman class was of Dutch origin and the miner or merchant class of English origin, merely widened this gulf. And the British government did little to bridge the gulf. It abolished slavery to the great loss and suffering of the Dutch. In the critical struggle between the Dutch farmers and the native races its policy seemed prompted by a meddlesome sentimentality rather than by prudence. Its treatment of the colonists of the interior was vacillating and arbitrary. If these things made the Dutch suspicious of English methods and of Englishmen, more recent events connected with the organisation and history of the South African Republics converted that suspicion into a positive dislike. And the paralysing effects of this suspicion and dislike are evident in every line of South African legislation.

Most serious in its effect upon the educational problems of the Cape has been the presence of the native races. As early as 1658 the Dutch settlers introduced slaves from West Africa. Soon convicts from the East Indian archipelago, Hottentots, and vanquished Bantus swelled the numbers of these slaves. Freed by the British Crown in 1834, the slaves remained in the colony and increased in numbers with startling rapidity. With peace and order within the colony, its pastoral and mining needs have attracted swarms of Kaffirs and Zulus. Ignorant, powerful, prolific, necessary to the industrial organisation of the colony, yet alien to its civilisation, this preponderating native element presents the gravest difficulty in South African education.

Primary Education.—True to Dutch traditions the early settlers did not neglect education. Primary schools taught by the precentors or “sick visitors” of the parishes, or by discharged soldiers and sailors, were established in such centres as Cape Town, Stellenbosch, Drakenstein, and Malmesbury before 1750.

The records of Cape Town show an organisation and endowment for a higher or Latin school as early as 1791. Governor de Mist, who took over the colony from the English in 1804 evolved a remarkable scheme for a national system. A central School Commission at Cape Town, advised by local magistrates and clergymen, in matters of local detail, should control the system. The system was to embrace a training college for teachers, a residence school for boys and one for girls, and was to be characterised by local rates, compulsory attendance and secular instruction. In the short time allowed him, De Mist worked out some details of his scheme. When the English reoccupied the colony in 1806 they found a School

Commission in control of a Latin school for boys, a girls' school, and eight primary schools.

With the revival of interest in education in 1810-15, the duties of the School Commission were enlarged to include Bible instruction and the distribution of Bibles. Two new classes of schools were formed under its guidance—in the outlying villages the Church-clerk Schools taught by church clerks, and in the larger centres the Free Schools of the Bell-Lancaster type for the poorer classes. Later, in 1822, Governor Somerset organised "English" primary schools for the English districts and brought out Scotch teachers. From the first, British governors insisted that English should be the medium of instruction in all schools.

As yet the country districts were unprovided with schools. The Church Clerk, Free, and English schools of the urban centres were few and unsatisfactory. The Bible and School Commission, without money, authority, or clerical assistants, was sadly inefficient. Recognising these conditions, the Governor sought counsel from Sir John Herschel, who was then in the colony. Herschel's report (1838) on a system of education for the colony, recommended the organisation and administration of education under a special director, more generous state aid, trained teachers, and better salaries. Accepting the report, in 1839 the Governor appointed Dr. Innes Superintendent-General of Education, and in 1841 dissolved the School and Bible Commission. Dr. Innes at once outlined the organisation in the larger centres, of "First Class" schools whose courses of study included primary and secondary subjects, and, in the smaller centres, of "Second Class" schools whose courses were largely elementary, and he promised aid (1843) to another class—the "Third Class" of later

years—of public schools in the sparsely-settled districts. Instruction in all these schools should be secular and religious, but non-sectarian. All teachers should be well-paid and well-trained. To insure this latter, Normal Training Courses were inaugurated at Cape Town.

The splendid work of European churches and societies in organising mission centres deserve recognition. Methodists and Moravians planted missions and mission schools as far north as the Orange River. Missionary societies in Paris and Berlin vied with those of Glasgow in their efforts to teach and Christianise the Kaffirs of the northeast border. Intended at first to reach only the natives, these mission schools expanded to meet the needs of the poor and distant whites. There were at least sixty missionaries in South Africa in 1840. Earnest as these missionaries were, their progress among the natives was very slow. Sir George Grey, the first governor after the institution of representative government in 1854, strove to assist the missions by developing the mechanical powers of the natives. To counteract the bookish character of mission education he decreed the organisation—under his personal supervision—of the first of a series of industrial schools for natives.

With the institution of representative government in 1854, the colonists, especially the Dutch, began to take a new interest in education. Despite the exertions of the crown in behalf of education, the results had not been satisfactory. The mass of children in the rural districts were untaught, while the girls were neglected in both rural and urban centres. Industrial and mission schools made little impression on the ignorant hordes of natives. Teachers were untrained; the Normal Training Class at Cape Town was discontinued in 1861; and students could not be

persuaded to enter the pupil-teacher system organised in 1859. Amid these conditions, the result of the new interest was the Special Commission of 1861.

The great Act of 1865 made effective the more important recommendations of this Commission. Parliament should control all crown expenditures for education, and all schools should be placed upon the grant-in-aid basis. Schools were carefully classified as undenominational or public, mission, and aboriginal. In the public schools which were graded first, second, or third class on the basis of curriculum, the voluntary principle was supreme. A local district might at its own option organise and select school managers, local contributions were voluntary, fees and attendance were not compulsory, even the government's approval of building and teacher and its pound-for-pound grant were optional. Mission schools for natives or the poorer whites and schools for the aborigines on the Border were to remain in the control of the churches and receive state grants, although the pound-for-pound principle should not necessarily characterise these grants. In these latter schools, inspection,—and state inspection was to be provided for all schools,—exactd only the most general conditions and most meagre curriculum.

Complete as the school system now seemed, it was a completeness in classification and form, not in practice. Despite the Act and despite the attempt in 1873 to organise District Boarding Schools, which should maintain boarding departments, and receive special grants for lodging and boarding students, the pastoral districts were still without education. In 1874 a modified pupil-teacher system was reintroduced, and in 1878 both the English and Dutch churches established Normal Training courses in

Cape Town, but still the great body of teachers were untrained. The country was poor; wars, epidemics, and drouth had laid it waste. The farmers of the interior were indifferent or intensely conservative. Racial jealousies, linguistic difficulties, the great native problem, these paralysed all educational effort. In 1879 resort was again had to a Special Commission. This commission would render the creation of schools, the training of teachers, local school rates, and school attendance compulsory, and would leave the selection of the language of instruction to the local managers. But poverty and jealousy still prevailed; the recommendations fell on deaf ears. Trifling reforms were effected. Private Farm schools for families of at least five children, none of whom live less than six miles from a Public school, were organised and aided in 1884. Before 1889 two standards were added to the primary school course, and the clause making English the medium of instruction was repealed. In 1887 a teachers' pension fund was organised, and in 1890 Railway Station schools, on the same basis as the Private Farm schools, were established for railway employees. But to the old needs of permanent local boards, compulsory schools and compulsory attendance, and local rates, the new age was now adding new needs—night-schools, science schools, technical schools, mining schools, etc. Another Commission of 1891 recommended the better training of teachers, more careful regulations as to buildings, and larger crown grants, compulsory attendance in populous districts, compulsory organisation of local boards with rating powers in such districts. A revised curriculum should include science and manual training and the medium of instruction in all public schools should be English or Dutch as requested by the parents. In connection with the

schools for the aborigines, the Commission noted that scarcely one-tenth of the native pupils received an education, regretted the overlapping of competing churches and societies, and expressed a fear lest the existing curriculum be too bookish.

In considering technical education, the Commission remarked that the country was pastoral in its activities and would remain so for years to come. It did not need industrial education. Even the mining interests were not yet important enough to require a school of mines at Kimberley. The state might content itself with bursaries for students at foreign schools of science, but there should be a college of agriculture in the colony and, better still, village schools of instruction in farming and pasturing. For the rest, natural science, drawing, and other forms of manual training might be added to the elementary curriculum.

With these recommendations the history of educational legislation in Cape Colony for the century practically ceases. The Department of Public Instruction remains in charge of the Colonial Secretary, with its Superintendent-General as chief executive, and with its general and special inspectors. Local managers are the voluntary guarantors of the maintenance of a school. They have little permanence in office, cannot hold property, and have no rating authority. The state may approve of the local managers, of the buildings, courses of study, teachers, fees, etc., and, once approving, the state must pay pound-for-pound for the maintenance of the school, with additional grants for such subjects as drawing, music, and Dutch.

Public schools are still divided into first class schools for boys or girls, or boys and girls, with primary and secondary courses of study; second and

third class schools with smaller grants and more meagre curricula; and such extra-aided or poor schools as railroad schools, special poor schools, district boarding schools, and trade schools for poor whites. Mission schools conducted by churches and missionary societies in village centres or rural districts, are subject to state inspection and receive state aid. They are governed by a conscience clause. Sometimes these mission schools are infant schools, sometimes industrial schools, sometimes in part, schools, in part, churches. Lastly, there are the schools for the aborigines. These are aided and inspected by the state, but are controlled by the church. They are largely industrial.

Stagnation in legislation has not meant stagnation in reality. Schools have increased rapidly in numbers and equipment during the last ten years. The attendance grows steadily better. The pupil-teacher system has so far developed that forty-five per cent. of the teachers are regularly certificated. State examinations for teachers have recently been reorganised. Summer classes in drawing and manual training, and conferences for teachers have been instituted, and the year 1900 brings promise of a kindergarten system.

Secondary and Higher Education.—Mention has already been made of the Boys' Latin School and the Girls' School at Cape Town. The courses of study in these schools were largely elementary, and the growing professional classes of the colony demanded more advanced instruction. Subscriptions were solicited in 1828, and, in 1829, the South African College was opened at Cape Town. It taught Dutch, English, French, classics and mathematics. In 1834, the college received its first state grant, and, in 1837, an official decree determined its status and organisation. In 1829, the Episcopal Church opened,

without state recognition, a Diocesan College at Rondebosch and, in 1856, St. Andrew's College at Grahamstown. About the same time the Grey School of Port Elizabeth was founded and, with generous state aid, the college at Graaff Reinet. But the demand for higher education was not fully met by the meagre standards of these colleges. In 1858, Sir George Grey took the first step towards the organisation of the Cape University by founding a Board of Examiners for the Colony. This Board, crown-nominated at first, in later years partially representative of the graduates, conducted examinations and granted proficiency diplomas in literature, science, law, medicine, engineering, etc. Gradually the number of candidates for the examinations increased, and the colony felt strong enough to replace the Board of Examiners by the examining University of the Cape of Good Hope. This university, modelled after London University, is controlled by a Chancellor, Vice-Chancellor, and Council, one-half of whom represent graduates, and grants degrees in arts, law, medicine, etc. For the various examinations of the university, students are trained in the South African, Diocesan, St. Andrew's, and other colleges. In consideration of this function, an Act of 1874 gave special aid to these colleges.

The demand for a modern education accounts for a recommendation of 1879 that science and modern languages should be added to senior schools. The same demand led to the institution of bursaries for the advanced education of poor boys.

A special Committee of 1895 recommended that agriculture be aided in the public schools with special grants, and that gardens be added to schools, and text-books on agriculture compiled. For advanced work among the farmers, travelling instructors should

be engaged and agricultural colleges established. The first of these colleges was established at Stellenbosch in 1888.

To train for admission to the advanced work of the colleges, thirty-five of the first-class schools were set apart as high schools in 1899, and required to pursue a course of study for matriculation.

CHAPTER XIV.

NATAL.

THE history of Natal prior to its erection into a separate colony in 1856 is brief but chequered. About the close of the second decade of the nineteenth century the Zulu king Tshaka overran and ruthlessly devastated the rich valleys and table-lands between the Drakensberg and the sea. About 1830 a few English traders—the first white people to come to the country—bought Tshaka's favour and settled on the coast near Port Natal. In 1836, the year of the Great Trek, a small body of Boers crossed the Drakensberg and descended upon the upper table-lands of Natal. In a short but desperate struggle, they broke the Zulu power, and with the withdrawal of the English traders established in 1840 the independent republic of Natalia.

This new republic was organised by emigrants whom the British crown still regarded as citizens of Cape Colony. Moreover, in expanding gradually towards the sea and possessing itself of a new trade route from the coast inland, it aroused the jealousy of the Cape merchants. Harsh treatment of natives friendly to the British crown finally brought on a crisis, and in 1842 a British force occupied Port Natal. After a bitter struggle the Boers submitted, the young republic accepted British suzerainty, and

in 1845 Natal was attached as a dependency to Cape Colony. In 1856 it became a separate colony.

Education was not entirely neglected even in the earliest days of the colony. Sparse population, vast estates, an unsettled life made organised educational effort an impossibility. But immigrant Dutch teachers visited the republic before 1845 and district records, as well as decrees of the Volksraad, prove an intention to provide funds for general education. And, as a highly religious people, and "the people of one Book" the Boers were taught to read, and, failing other agents, the pastor was the teacher. Moreover, the missionary to the natives in Africa had already learned to work through the mission school for native children, and with the British occupation began the mission schools of Natal.

Before 1865 an effort to develop such Boer schools as still existed, and at the same time to organise and maintain typical state schools, bore fruit in a high school at Durban for boys, in two primary schools for boys and girls, and in sixty state-aided rural schools. It bore fruit, too, in an expressed purpose to increase the number of the state schools and to prescribe conditions for the state recognition of private schools. To effect this purpose the Governor of the Colony appointed a Superintendent of Education who should administer educational affairs, and prescribe conditions, subject to the Governor's consent. A high school at Pietermaritzburg was now added, and before ten years had passed the number of state-aided primary schools increased to ninety. To meet this expansion of educational activities, the Governor organised in 1877 a special Council of Education with the Superintendent of Education as chief of the executive, and carefully defined the respective spheres of primary and secondary education.

The progress of rural education was slow—and, from the character of the settlements, must remain slow. Individual farmers engaged tutors for their households, or a few neighbouring farmers combined to engage a general tutor. But the cost was great and the tutors scarce or unsatisfactory. In 1887, the state offered recognition and aid to all such farm-schools with an attendance of ten pupils, as would submit to state inspection and control. Two-thirds of the primary schools for Europeans in Natal are now of this class.

With the institution of responsible government in 1893, the educational interests of the colony came more directly under the control of the people. A responsible minister of the crown replaced the Council of Education and directed the Superintendent and the inspectors.

Responsible government as understood by British democracies rendered immeasurably more difficult of solution the great educational problem of Natal—the problem of the education of the non-European races. The 55,000 Europeans—English and Boers—live amid 60,000 Indians from Hindustan and 750,000 Kaffirs, and must dominate them. To do so they practically deny them the franchise, repress their interest in matters of state, and more or less plainly show their unwillingness to put within their reach such an instrument of political advancement as a good primary education. Moreover, the colony is financially unable to meet the educational needs of such masses of men. The conditions have left the natives and the Hindus practically without education or with such education as the missionary or philanthropist may provide. Most of the thirty-six Indian schools which in 1899 were attended by 3,561 children, and all the 188 native schools attended by

10,725 native children are mission schools aided by the state. In these the equipment, organisation, and the course of study are as simple—and as meagre—as the circumstances permit.

Of the schools for Europeans there were 293 in 1899 with an enrolled attendance of 9,419. While attendance is not obligatory, these schools are so distributed throughout the Colony, and the school fees are so slight that with the aid of a few proprietary schools they assure to all but about 200 boys and girls the rudiments of a common education. The state directly equips and maintains only 29 of these 293 schools for Europeans, but it demands of all, as a condition of state aid, a proper equipment and course of study, non-sectarian instruction, and the right of inspection.

Of these twenty-nine state schools, two are high schools, in part residential, whose course of study leads to the matriculation examinations of the Cape University. The five model schools in Pietermaritzburg and Durban are officered mainly by teachers imported from England, and have evolved a form of pupil-teacher system much like that of the mother-country. Problems that press for solution in other British colonies are not wholly overlooked in the seventeen state primary schools. The state is striving to maintain the rights of local initiative in the matter of building, teachers and curricula. It already fears the dangers of extremes in examinations, in athletics, military drill, and book-learning. Some years ago it recognised the need of artistic culture in the creation of two art schools, and to-day, despite the purely pastoral life of the people, it gropes its way towards industrial and scientific instruction.

CHAPTER XV.

THE Australasian colonies are peculiarly British. The colonists themselves are almost wholly Britons, or the descendants of Britons. The French and Dutch problems of Canada and Cape Colony, the negro problems of South Africa and the West Indies have no parallel in Australasian politics. Severed in the Pacific from the greater movements of Europe and America, Australasia must seek inspiration in her own initiative, which is British in origin, or in the ideals of the land with which she is connected by the closest ties of kinship, commerce and polity—which is Great Britain.

It is due largely to this British temper that the history of public instruction in Australasia repeats with singular fidelity the history of public instruction in England. In Australasia as in England, to educate was at first a duty and a prerogative of the churches. The educational needs of modern democracies soon exhausted the resources of the churches and they sought the assistance of the state. But grants-in-aid carried with them in the last analysis, the control of public instruction, and here the churches and the state fought long and anxiously. Out of the struggle issued, side by side with the churches' schools, a series of state schools whose instruction was non-sectarian, compulsory, and, to a large extent, free.

* For education in Canada and New Zealand, see *Progress of Canada* and *Progress of New Zealand*.

This resemblance in general development repeats itself in the details of school organisation. Neither Australasia nor Great Britain has accepted the Froebelian kindergarten, but with the same earnest purpose and the same haphazard methods, they both now bravely attack the problems of manual and technical instruction. Both are developing systems of advanced primary instruction, both are wedded to the "scholarship" method of encouraging secondary and higher education, and, having reaped the same unhappy fruits, both now turn fiercely upon the "examination evil." The resemblance is even stronger on the professional side. The colonies and the motherland have alike placed upon a somewhat more satisfactory basis the teacher's tenure of position and his salary, but both still cling to an antiquated pupil-teacher system and look with indifference or half-hearted sympathy upon special schools for the training of teachers.

Thus far popular instruction in Australasia resembles that of the motherland. But beyond this comes the difference. Freed from the prestige and the vast social influence of a state church, the public school has developed faster in Australasia than in England—and farther. English statesmen are still active in patching up the tottering fabric of state-aided sectarian schools, while church and state are practically distinct in Australasian education. And English educationists still stand helpless before the problems of secondary education, while the Australasian colonies have completed or have indicated their way of completing the organisation of their High Schools. In short the English system is still complex, irregular, and inconsistent, while each Australasian system is now simple, uniform, and complete.

Moreover, isolation from the rest of the world,

and the independence of necessity have given the Australasian democracies a polity more communistic than that of any other British people. This communism is evident in their school administration. More so than Englishmen, or even Canadians, they centralise educational authority. Responsible ministers of the crown control and direct public education through inspectors or other executive officers. More or less directly these ministers build, equip, maintain, and discontinue schools. They appoint, pay, and dismiss teachers, prescribe the courses and methods of study, and even shape the discipline of the schoolrooms.

Australasia's three million square miles of territory are occupied by scarcely five millions of people. Of these, about one-fifth live in Sydney and Melbourne. Almost two-fifths are found in the widely separated towns and villages of the coast districts, while more than two-fifths are thrown together in the shifting mining centres of the different colonies, or are scattered about in remote pastoral stations. The same standards of educational law and organisation are wholly inapplicable to such diversity in conditions. In no British colony is the diversity so great as in Australasia, and no British colony has worked more earnestly, or spent more lavishly to provide special adjustments to meet that diversity. In the organisation of her educational systems, Australia has worked against great odds. Her first settlers did not give promise of a great people. Her early progress was slow and her population is still inconsiderable. Floods, droughts, mining excitements, financial collapses, political crises, have at all times impeded her reforming energies. But she has achieved something, as the detailed sketches that follow will abundantly show. And if these things have been done in a few

decades by scattered and struggling colonies, what may not be done by the great Commonwealth in the centuries to come?

NEW SOUTH WALES.

CAPTAIN COOK's favourable report of 1768, and the sentimental desire for new territories to offset the loss of the American colonies, first turned English minds towards the South Pacific, but it was the need of remote lands for penal settlements that at last induced the English government to occupy the eastern coast of Australia. In 1788, Captain Phillip guided the first fleet of convicts and guards into Sydney Harbour. The character of these first settlers, their extreme poverty, together with the remoteness of the colony from England, made rapid progress impossible. In 1800, there were not 6,000 Europeans in Australia.

As became the new spirit of the age, the children of this petty settlement were not neglected. The crown's first instructions required Governor Phillip to set aside land for the maintenance of the schoolmasters. In 1792, the Society for the Propagation of the Gospel offered to pay the salaries of four teachers to be chosen from among the educated convicts. In 1802, Governor King urged the home government to provide more generously for the education of the youth of the settlement, and Governor Bligh reported in 1807 that 400 children were receiving regular instruction. Early in the century the state built and the settlers maintained a school at Hawkesbury, and out of orphan dues, a form of customs levied for the benefit of the orphans of the colony, the Church of England maintained schools at other centres.

The condition of the colony during the first quarter of the century was not happy. It was not until 1815 that the colonists broke over the mountains into the fertile lands of the interior. Poverty, the grosser excesses of the liquor traffic, and ruthless native wars kept down population. The bitter strife between freed convicts and free settlers, and the arbitrary conduct of the early governors prevented healthy political action. Corruption and lawlessness dominated the life of the colony.

But the public spirit of an Australian colony is never so hopeful or so generous as in the presence of disaster. Bourke, who became governor in 1831, saw in popular education the remedy for the evils of the colony. Supported earnestly by the home government, and by the colonists at large, he strove to give the "Irish National System" to New South Wales.

But with the National System, even though it should mean state aid to denominationalism, the churches would have nothing to do; and for the moment they had their way. In 1834, just one year after the mother country set the example, the colony formally recognised popular instruction in a grant-in-aid to each denomination, proportioned to the amount collected and distributed by such denomination itself.

This first step was naturally objectionable to a people whose temper is socialistic and never too responsive to religious enthusiasm, and persistent agitation soon forced the government to a further step. In 1839, it offered grants-in-aid to undenominational schools wherever the settlers should organise them, and in 1844, through Mr. Lowe's Special Commission, it condemned the denominational system *in toto*. Amid great excitement it followed up this condemnation by the Act of 1848, which placed undenomina-

tional, or state schools, and denominational schools upon equal footing under distinct Boards of Control. The Denominational Board, which was representative of the various religious bodies, should, in a general way, direct the churches' schools, and distribute the state grant among the denominations, while the National Board should control the undenominational schools and distribute the state grant among such of them as should provide one-third of the cost of building and equipment.

Like all makeshifts this Act was unsatisfactory. The National Board looked with jealous eyes upon the interdependence of church and state, and the churches resented the interference of a secular agency such as the National Board. Meanwhile the great mass of the colonists condemned the overlapping, the extravagance, and the confusion that resulted from the rivalries between the two classes of schools. The institution of responsible government placed the remedy within reach of the people, and in 1866 the dual control of education was abolished and both denominational and national schools were placed under the control of a Council of Education. This Council was authorised to build, equip, and maintain all national schools, and, under certain well-defined conditions as to buildings, attendance, courses of study, and inspection, to distribute grants-in-aid among denominational schools.

To meet the needs of sparsely settled or remote districts provisional and half-time schools might replace the regular national schools. To advise the Council as to the school needs and conditions of the district, local committees might be created. No bar was placed in the way of sectarian instruction in the denominational schools, but religious instruction in the

national schools, while obligatory, must be general and unsectarian.

With a lighter load to carry the Australian can travel faster in reforms than the Englishman. His communistic temper, resenting the limitations set upon the state's authority by the make-shift Act of 1866, backed Sir Henry Parkes in the reforming Act of 1880. This Act replaced the Council of Education by a Minister of the Crown, abolished grants-in-aid to denominational schools, and completed the organisation of the national system.

By virtue of this Act, or of regulations under this Act, all school property is now vested in the crown and apart from the nominal school fees, all school revenues are derived from the crown. The Minister (i.e., the crown) builds, equips, and maintains the national schools and trains, licenses, appoints, pays, and dismisses teachers. He also prescribes the kinds of school, the courses of study, the methods of teaching, the examinations, even the discipline of the school-room.

At the other end of the scale of authority are the local school boards. These elected boards visit schools, inquire into the attendance and discipline, and even suspend teachers temporarily, but, after all, their jurisdiction is limited to recommendations. Between the Minister and the local boards come the inspectors, the executive officers and representatives of the Minister. In the absence of an effective local authority, the duties of these inspectors are more varied and more important and their influence greater than elsewhere in the Empire.

New South Wales is particularly generous in her efforts to meet the needs of remote and sparsely settled districts. The special adjustments of her national system include provisional, half-time, and

house-to-house schools. Provisional schools are organised in temporary quarters for not more than nineteen students at centres less than four miles from a public school. Half-time schools are organised in more remote districts for at least eight pupils, living not less than ten miles from a public school. House-to-house schools are formed where the conditions would not justify even the half-time schools. To all special schools, considerable latitude is allowed in the matter of the courses of study or the qualifications of teachers.

In the training of its teachers, New South Wales is peculiarly English. For pupil-teachers there is a four-years' course of study, with much the same instruction, practical experience, examinations, and scholarships as in England. For those who wish to go beyond the pupil-teacher stage and for all others there is a two-years' normal course at Hurlstone or Sydney. These normal courses have residence privileges, and are heavily endowed with scholarships, and are affiliated so far as possible with the University of Sydney. All certificates from the normal courses are provisional; experience under inspection makes them permanent.

The public school curriculum embraces the usual elementary subjects and emphasises, as elsewhere in Australasia, drawing, music, physical exercises, and military drill. While the schools are non-sectarian, religion is taught as a secular subject—"general religion, not dogmatic or polemical theology." Moreover, sectarian instruction may be given to those who wish it at special times apart from the regular classes by the clergymen of the denominations concerned.

Between six and fourteen years of age attendance is compulsory for at least 140 days in the year. Exemptions are allowed, however, on the grounds of

illness, remoteness from school, efficient instruction from other sources, and a completed elementary education. While state railroads must transport children to school free, and while the minister may exempt the poor from all charges, tuition fees of 3d. per pupil per week are still exacted.

Secondary Education.—When twenty students in a certain school wish to continue the ordinary subjects beyond the primary grades, the Minister may organise a superior primary school. The existence of 250 such schools is evidence of the colony's interest in advanced education. In special centres high schools may be organised to continue the primary course of studies and to prepare for matriculation into the University of Sydney. These high schools—there are now four—give courses of training in classics, modern languages, history, literature, mathematics, and physical science. The oldest and best-known of the state-aided secondary schools of Australasia is the Sydney Grammar School.

Mention should here be made of the numerous "private" schools of the colony, maintained chiefly by the Roman Catholic and Anglican churches. This mention is more deserved from the fact that about twenty per cent. of the school children of the colony attend the elementary schools of the "private" class, and from the additional fact that both in number and character the advanced schools of this class still dominate secondary education in New South Wales.

Technical Education.—New South Wales is young, its interests are not industrial, and yet it is doing something for technical education. All primary pupils are now taught drawing, and girls are taught needlework. Twelve schools of cooking are now connected with the elementary school work for girls and ten workshops for manual training for

boys. Opposition to this form of training assumes a less serious phase in connection with the Higher Technical College at Sydney. This state institution, with its numerous laboratories, workshops, and museums, with its branches at Bathurst, Goulburn, Newcastle, Albury, West Maitland, etc., and with its local classes in smaller centres, exercises a vast influence on the industrial life of the colony. Its students are successful competitors in the examinations of the City and Guilds of London Institute. The colony maintains in addition several agricultural schools and experimental stations.

Higher Education.—The first step towards the establishment of Sydney University was taken in 1848, and the university was formally opened in 1852. Aided by the state it now conducts courses, holds examinations and grants certificates in the usual university departments. Affiliated with the university are the theological colleges of the Roman Catholic, Anglican, and Presbyterian churches, as well as a non-sectarian Ladies' College.

VICTORIA.

The scarcity of pastoral lands in Tasmania sent adventurous stockmen, about 1834, from that island to the splendid pastures about Portland Bay and Port Phillip. The success of these stockmen soon attracted many others from the older colonies, and in 1837 the Port Phillip settlement was formally recognised as a part of New South Wales. The first superintendent of the settlement was appointed in 1839, in 1842 its population was 13,000; and in 1851, with a population of 80,000, it became the independent colony of Victoria.

Prior to its separation from New South Wales

Victoria had been subject to the same educational conditions and regulations as the mother colony. The denominations with grants-in-aid from the state were maintaining twenty schools in 1841. A denominational Board of Control was created in 1848 to systematise these crown grants. Separation itself was followed by the creation of a National Board of Control to supplement the denominational board by organising a secular system of education.

Preoccupied with the momentous political and financial problems that attended upon the discovery of gold in 1851, for the moment the colony neglected education. Meanwhile duality of control resulted in Victoria, as it resulted in New South Wales, in excesses, and deficiencies. Both Boards were eager to serve wealthy and populous districts and both overlooked the poorer districts. The attendance was poor. The schools themselves were often abandoned dwellings, and the teachers unsuccessful miners.

For ten years the discontent grew, until at last it found expression in the Common Schools Act of 1862. This Act replaced the two central boards by a single board of education of five members, no two of whom should belong to the same denomination. The board was to direct and maintain public education throughout the colony, to organise new schools and to take over such private or denominational schools as should recognise its regulations; provided always that all schools be at least two miles apart and have an average attendance of twenty. Local committees should be formed in the school districts to supervise the schools and to appoint or dismiss teachers.

The Act gave unity and method to the educational administration, but in other respects its operation was not so satisfactory. For reasons of economy the

new Board was slow in organising national schools, but generous in the recognition of existing denominational schools. Remote districts required special adjustments of the law, but the regulation that one-half the initial cost of buildings and equipment should be borne by the locality was obligatory upon the poorest as well as the wealthiest localities. Moreover, the influence of the clergy and their interest in popular education gave them a dominant position in the local committees, and, therefore, in the organisation of the schools, and in the appointment and dismissal of teachers. National and secular schools were thus in reality as far off as ever.

These conditions were intolerable to the growing communism of the colony. A Commission of 1866-67 reported in favour of a responsible central authority with a wider jurisdiction than the Board of Education, of local committees with advisory powers, of the professional training of teachers, and of secular and compulsory education. At last an Act of 1872 gave the final form to the Victorian school system. All schools aided by the crown must be vested in the central authority, which is a minister of the crown. The Minister must build and maintain all public schools and appoint and dismiss all teachers and inspectors. Education should be compulsory and secular, although sectarian instruction might be given after the regular school hours. Pending the organisation of new schools in remote districts, the Minister might pay the fees of children in private schools, but after 1877 this temporary arrangement must lapse.

The crown's right to appoint, promote and dismiss teachers was transferred by an Act of 1883 to the Public Service Board. A special committee of classifiers was appointed to submit annually to this board

a list of teachers classified on the basis of school experience and qualifications. From this list the board, in a rather automatic way, made its appointments, subject to the approval of the minister.

Under this Act, together with the consolidating Act of 1890, and the regulations of the last ten years, the present school system of Victoria is administered. The minister of the crown, who is at the head of the Education Department, acts through a permanent secretary, in organising and maintaining schools, in issuing instructions and regulations, and in revising the courses of study. To assist him he has the reports and recommendations of the inspectors, who make two visits annually to each school for inspection, and for examination purposes. The teachers, as already stated, are appointed by the Public Service Board from lists prepared annually by a committee of classifiers. The committee of classifiers was until recently so constituted as to be semi-independent of the crown. By the appointment of officers of the department of education the committee has now become a wholly dependent body.

As the crown controls and maintains the schools, the jurisdiction of the local committees, or Boards of Advice, as they are called, is very limited. They supervise the most urgent repairs, report upon the attendance, and upon the school needs of their districts, and, subject to the minister's approval control the use of the school buildings. They may suspend teachers temporarily.

The schools themselves are full-time, part-time, adjunct, and amalgamated schools. The part-time schools correspond to the half-time schools of New South Wales. A principal may direct two schools, at a greater or less distance apart, the smaller of

which—the adjunct school—consists of only junior classes.

Amalgamated schools with free transportation to and from the central schools have been enthusiastically supported in Victoria.

Attendance is compulsory in Victoria between the ages of six and thirteen, subject to such general exemptions as hold in New South Wales. Special truant officers enforce the compulsory law in urban centres, but in other centres this duty rests with the Board of Advice. Tuition, except for certain extra subjects, is free.

The course of study resembles that of New South Wales. As yet the kindergarten, hand and eye work, manual training and domestic science are not obligatory. Religious instruction may never be given by the teachers, but Boards of Advice may recommend to the minister the use of the school buildings for religious instruction by clergymen after school hours.

The monthly "school papers" issued by the Department of Education for use in the higher classes, contain scripture lessons of a very general and unsectarian type, and have not removed all hostility towards the secular system. The opposition of private schools, which now enroll one-fifth of the school children of the colony, resulted in the appointment of the Commission of 1900. It is probable that a set of scripture lessons will be accepted by the colony for use in the public schools.

The teaching staff includes monitors, pupil-teachers, assistants, and principals. Monitors are chosen by examination, from the senior students of the primary schools. They are paid small salaries by the state, and may be employed only in the larger schools. Pupil-teachers, who are often ex-monitors, are subject to a four-years' course of training with an ex-

amination for admission and with annual examinations for promotion. They are instructed by the principals of the schools and may teach in only the largest schools. For assistants and principals the lowest state certificates are the "licenses to teach" which entitle holders to ranking among the teachers of the smaller schools, the "certificates of competency" which entitle to ranking among the teachers of the larger schools, and "certificates of competency with honours" which give first-class ranking.

The schools themselves are minutely classified on the basis of attendance and on this classification and on success in the examinations the salaries of the teachers depend. It may be added that Victoria, like other British colonies, is not without her "unclassified" teachers.

Beyond the practical experience of the schoolroom as monitors and pupil-teachers—and this experience is not obligatory—and beyond the annual examinations for teachers which require only a modicum of the science and methods of teaching, teachers in Victoria receive no professional training. Reasons of economy—and perhaps the unpopularity of the school—induced the colony in 1893 to abolish the Training Institute at Melbourne. Reorganisation of this Institute has been promised and this reorganisation suggests a college akin in methods to the English training schools and affiliated with Melbourne University.

Secondary Education.—The field of secondary education in Victoria is occupied almost entirely by private and church schools. The state has contented itself hitherto with special grants for advanced subjects in the primary schools, and with very generous bursaries for students of the primary schools who wish

to enter secondary schools or the University at Melbourne.

Technical Education.—As early as 1877, the Education Department in its efforts to introduce kindergarten methods into the schools engaged an expert kindergartner to train the teachers of infant classes. Motives of economy forced the discontinuance of the efforts before their value was evident. Drawing and elementary science are taught to all students in the primary schools, and the girls are required to take sewing. Early in the history of mining, schools of mines were established at Bendigo and Ballarat. A special commission of 1889 reported against the introduction of manual training, but recommended state aid for, and, to some extent, state organisation, of technical schools in the colony. Of these schools there are now about eighteen, with courses in science, art, the trades, etc. Originating locally and controlled by the subscribers, the schools apply for state aid, accepting in exchange the crown's nominees on the Managing Boards and acknowledging the state's right of inspection and examination. The trade-classes are successful in Melbourne and Geelong. At Dookie and at Longerenay the colony maintains agricultural colleges, and at Richmond a school of horticulture.

Higher Education.—Melbourne University was incorporated and endowed in 1853. In 1885 it boasted sixteen students, while now it enrolls about 700, of whom about one-third are women. It conducts courses and grants diplomas in arts, science, law, and medicine. Affiliated with it are the colleges of the Episcopal, Presbyterian, and Wesleyan churches.

The Educational Outlook.—Victoria mines have not been so profitable since 1875. Drought and epidemics blighted farm and pasture. "Heavy expen-

ditures upon public works created a large national debt. All this, with excessive speculation, brought on the financial collapse of the early '90's. Victoria faced bravely the demands for retrenchment. Educational expenditures were reduced by thirty per cent. Many schools were closed, many teachers were retired. Salaries were reduced, bonuses for extra-subjects, and bursaries for secondary schools decreased or cancelled, kindergarten work was abandoned, the Training College at Melbourne closed, technical education starved and a great impetus given to the cumbersome amalgamation of schools, and to the increase of monitors, pupil-teachers, and unclassified teachers at the expense of the regular assistants and principals. In so far as these conditions are the natural results of retrenchment, little objection can be taken to them, but there are not wanting educationists in Victoria who condemn features of its educational system that are not due solely to motives of economy. The automatic classification and promotion of teachers discount all ambition and industry. Payment of teachers on the results of examinations is more significant and more vicious in effects than ever was the results-payments system of England. Teachers are, on the whole, untrained and the inspectors, too few in number, are inspectors in name and examiners in reality. Moreover, the course of study is not very modern and not very generous. Already, however, the colony is on the brink of reforms in education and these reforms, as demanded by the Commission of 1899, leave little to be desired.

WEST AUSTRALIA.

In 1829, at Perth and Fremantle in the Swan River district, Captain Stirling laid, amid much

tribulation and somewhat insecurely, the foundations of the first permanent settlements in West Australia. For half a century the colony grew very slowly. Without mines or fertile lands, beset by hostile natives, and defamed by vicious colonist elements from Tasmania and Victoria, it could not attract immigrants. In inducing the home government in 1848 to convert the colony into a penal settlement, the inhabitants sought relief in a remedy that indirectly aggravated the evil. After 1885, however, and contemporaneous with a successful agitation for representative institutions, the progress of the colony became more marked. The opening up of rich pasture lands, the discovery of gold, and the development of the timber trade put life into its drooping financial interests, and a population of 4,500 in 1848 leaped forward to 170,000 at the close of the century.

Vast areas, a meagre population, and an empty treasury present an unsatisfactory basis for a national system of education. Free schools were established in Perth and Fremantle in 1837. Half-a-dozen schools were in receipt of state aid in 1840, and in 1844 the state aided two mission schools among the natives. To systematise these grants-in-aid, the governor created a Board of Education, largely clerical in character. In addition to distributing the grants-in-aid to all assisted schools, whether secular or denominational, the Board prescribed the fees for the secular schools, introduced into them the methods, and, as far as possible, the books of the Irish National schools, and in a vague way defined the course of primary instruction. Secular or government schools must confine themselves to secular instruction, but such secular instruction might include Bible narratives—without comment.

The introduction of an elective element into the

Legislative Council of the Colony, and the discussion over the great English Act of 1870 gave a new and deeper interest to popular education. This interest resulted in the Elementary Education Act of 1871, which replaced the Board of Education by a new Central Board of five crown-nominated laymen. The new Board defined the courses of study, fixed the fees, appointed inspectors, organised school districts, and distributed the grants among the government and the assisted schools (as private or denominational schools were now to be called). The Act shows in other features the state's timidity in the assumption of authority in educational matters. Local or district Boards of five members each might be created to supervise the government schools in all local details, to appoint teachers subject to the approval of the Central Board, and to enforce attendance under some such conditions as obtained with the Attendance Committees in England. Copying further the English law, the Act introduced the principle of payment by results, and emphasised the undogmatic instruction of the government schools and the "Conscience Clause" of the assisted schools.

Subsequent regulations expanded this organisation. Remote districts might institute provisional and half-time schools. State examinations and licenses were provided for teachers, and the teachers themselves were classified, and paid on the basis of such classification. By-laws introduced the framework of a pupil-teacher system, defined the duties of the inspectors, and elaborated the results-payments idea.

The recommendations of the educationists of the colony, as contained in the report of the Commission of 1887-8, and in the annual reports of the inspectors, resulted in reorganisations of the pupil-teacher and results-payments systems, and in the ex-

pansion of the primary curriculum. They resulted also in a rearrangement of the method of appointing teachers. The dearth of experienced teachers had hitherto forced the District Boards to fill the schools with incompetent persons. Henceforth all appointments must be made from lists prepared by the Central Board, and these lists contained the names of trained teachers from England and from the other Australasian Colonies, as well as of those already engaged in teaching, for whom a special travelling lecturer on methods of teaching was now provided. The same recommendations condemned the grants-in-aid to assisted schools, with the resulting overlapping and extravagance. But reforms here must wait upon the institution of responsible government.

The existence of the Central Board of Education was incompatible with responsible government; and a minister of the crown, with a department of public-instruction, replaced it in 1890. The same year saw the rearrangement of the method of electing the District Boards and the transfer to the crown of the right to appoint and dismiss teachers, and marked the beginning of the recent and, on the whole, successful efforts to abolish the results-payments system, and increase the appropriations for state education. In 1895 the state withdrew all grants from the assisted schools, substituting therefor a block-grant compensation.

In 1899, subject to the usual exemptions, school attendance was made compulsory between the ages of six and fourteen, and attendance officers or teachers, and District Boards were charged with the duty of enforcement. Compulsory attendance brought with it free tuition, although the state retained, but has never exercised, the right to exact fees from pupils below or above the compulsory age.

Efficient instruction elsewhere is one condition of exemption, and the Minister has been authorised to recognise formally the efficiency of extra-state schools by regular inspection. As one-fourth of the school children are enrolled in these schools, the importance of this authorisation is apparent.

In the details of its system of education, West Australia has followed the same lines of development as the other Australian colonies. Here, as elsewhere, the effort to create a strong local authority has failed. The minister at the head of the Department of Education is practically the supreme and sole authority in education for the colony. The District Boards have degenerated, as already indicated, into mere advisory bodies. Teachers are classified and paid by the state. All appointments and promotions are also made by the state on the recommendation of the Inspector-General of the colony, and in this recommendation regard is had to the certificates, experience and professional skill of the teachers. The colony endorses the certificates of teachers trained in other colonies, and conducts regular examinations for the licensing of such citizens of the colony as wish to be classified as teachers. Beyond the training of the monitors and the pupil-teachers, who, with the certificated teachers, make up the teaching staff of the colony, and beyond the lectures in the methods of teaching by the expert sent throughout the colony by the Minister, the colony offers at present no special professional training for teachers. Indeed, in view of its limited revenues, and of the small number of its pupils and teachers, nothing more could be expected. It says much for its faith in professional training that, despite the great sacrifices entailed, it now prepares the way for the creation of a Training College.

West Australia imitates the other colonies in its special adjustments of schools to districts. State schools, built and maintained by the state, must show an average attendance of twenty. Provisional, half-time, house-to-house, and special schools are housed and equipped by the localities and maintained by the state under conditions peculiar to remote districts and shifting mining centres.

In certain forms of modern education, West Australia has done little more, and with its limitations can do little more, than deal with beginnings. It has no kindergartens, although the infant classes of the urban centres are conducted on kindergarten principles. Evening continuation classes in Perth and Fremantle, and clay-modelling, drawing, and sewing prescribed in its primary curriculum, attest its faith in technical training.

Secondary Education.—The state permits the larger schools to continue the elementary course into advanced subjects, and offers bursaries, tenable in secondary schools, for graduates of the primary schools. The Boys' High School at Perth, a residence and day school with nominal fees, provides secondary courses modelled largely on those of the more recently established secondary schools of England. In return for an annual grant, the state, through its nominees on the governing board, practically controls the school. Parallel to this Boys' School is the Girls' High School at Perth. Apart from these advanced primary courses and these High Schools, secondary education in West Australia is controlled by proprietary or denominational schools. Of these the Alexander Scotch, and the Fremantle School, with the School of the Christian Brothers, are the best known.

Higher Education.—For higher education the

youths of West Australia must go abroad. Adelaide University, with its local examinations in West Australia, attracts the greater number.

SOUTH AUSTRALIA.

A colonisation commission was incorporated in 1834 to colonise South Australia, and brought five hundred settlers to Adelaide in 1836. Excessive speculation, extravagance, collapse, and great poverty marked the early years of the settlement. In 1841, the British government assumed its debts and declared it a crown colony. With the development of the fertile inland, farming and stock-raising brought excellent results. Silver, copper and gold mines increased this prosperity. In 1840 the population was 14,000, and at the end of the century it was about 360,000.

During the first ten years of the colony's existence, education was left to the parents, or to Venture schools. In 1847, in recognition of the state's growing interest in education, the Governor offered capitation grants to the Venture schools. As these Venture schools generally acknowledged the dominating influence of this or that denomination, the increase in schools and grants resulted in unhappy partialities, rivalries, and extravagance. The year 1851 saw the creation of a crown-nominated Central Board of Education of seven members to establish schools in neglected districts, and to recognise with grants-in-aid such existing schools as should guarantee elementary instruction on a religious, but non-sectarian, basis. This Board should appoint the teachers, and should provide for the training of the teachers to be appointed.

Despite the law, the prestige of the clergy and

their abiding interest in education still gave to the denominational schools a pre-eminence in the education of the colony. Moreover, with the institution of representative government in 1856, the Central Board itself became an anomaly. Discontent and agitation resulted in the great law of 1875, which created a Council of Education under the presidency of a paid official of the state, made education compulsory between the ages of seven and thirteen, and carefully defined the state's relation to religious instruction. While secular instruction might include the most general religious principles, sectarian instruction must be relegated to other than school hours, and to other than schoolmasters. Henceforth the salaries of the teachers should depend upon fees, upon a fixed state grant, and upon a special state grant in the form of results-payments. To make effective this last clause, additional inspectors were appointed in 1876.

The Council of Education assumed and performed duties for which, in the nature of a British democracy, only a minister of state could be responsible. In three years it was replaced by a minister of the crown, and its president became the minister's chief executive, as inspector-general.

Subsequently, in 1896, on the death of the inspector-general, an unusually able official, his duties were assumed by a Board of three chief inspectors. This Board, subject to the approval of the minister, formulates courses of instruction, directs, appoints, promotes and pays teachers, inspectors and other officers of the department of instruction. And further, it publishes, and sells at cost, the text-books of the colony, together with special monthly papers for the use of the pupils.

The ordinary inspectors visit the schools twice

each year, once for purposes of inspection, and once for purposes of examination and promotion. Local authority now exists only in the merest framework. Local Advisory Boards, partly nominated and partly elected, inspect school buildings, and make urgent repairs, supervise the attendance, and in a general way offer the Minister their suggestions on the condition of the school.

Compulsory attendance, more carefully defined as to days and distance from school, and agents of enforcement by by-laws subsequent to the Act, was an injustice so long as fees were enforced. In 1891 fees were abolished between the ages of seven and thirteen, and, in recognition of the need of higher education, even those over thirteen were exempted from fees after 1898.

The public school curriculum is that common to Australasia. Drawing, singing, needlework, manual training and cookery are mentioned in the course of study, but are not all insisted upon in the schools. As elsewhere in these colonies, and owing to the same conditions, schools may be public, provisional or part-time schools. Public schools proper are graded according to attendance, and the salaries of teachers vary with the grading. Provisional or part-time schools are unclassified as to teachers and salaries.

In this peculiarly English colony, private and denominational schools have always prospered. Despite their fees and uncertificated teachers, and the opposition of the state, these schools now enroll one-fifth of the school population of the colony. In recognition of their importance, officers of state may inspect them as to efficiency and attendance.

In 1876 a Training College was established at Adelaide. The one year's course in this college consisted of a half-year's training in general school sub-

jects and in methods of teaching, and a half-year's practice in teaching in state schools. The college, heavily endowed by maintenance grants, was open to pupil-teachers who had completed the regular four-years' course as pupil-teachers, or to successful candidates at the university examinations, or to such persons as the Minister might admit. Graduates from the school received a low grade certificate which could be raised in grade by later state examinations or by successful experience.

In 1900 this Training College was so reorganised as to affiliate its work with that of Adelaide University. After a two-years' pupil-teacher course in which he prepares himself for the local examinations of the University, the candidate enters the Training College for two years' study in Training College and University and for practice-teaching in the public schools. The six years' training closes with another two years' study in the University. Generous maintenance bursaries accompany this course of training. Apart from the regular teachers, the monitors and pupil-teachers are selected, trained, and paid under conditions similar to those which obtain in the other colonies.

Secondary Education.—Hitherto the state has contented itself in its support of secondary education with a generous supply of scholarships for graduates of primary schools in attendance at secondary schools, and with its provision for advanced work in certain primary schools. Voluntary agencies, private and denominational, have done much to supplement this in the maintenance of about twenty institutions for secondary education. Of these the chief are St. Peter's School, Adelaide, founded by the Episcopal Church in 1847; the Prince Alfred College of the Wesleyans; the undenominational Whinham College,

a first-class commercial college founded in 1854; the College of the Christian Brothers; Way, Hahndorf and King's Colleges, and Queen's School.

Technical Education.—As early as 1884 the colony recognised the importance of technical instruction in agriculture by adding it—unsuccessfully of course—to the curriculum of the elementary school. In 1885 the College of Agriculture, together with an experimental farm, was established near Adelaide. Students of fifteen years of age are admitted to this college by examination, and graduate after a three-years' course, in which practice bulks as large as theory. To meet the needs of the younger and more numerous students who graduate from the primary schools, a secondary school of agriculture was organised at Adelaide in 1897, and subsequently classes in agriculture were instituted at Jamestown, Clare, Naracoote and other centres.

The School of Mines, with day and night classes, and a three-years' course, was opened at Adelaide in 1889. Like its fellow-institution, the School of Design, Painting and Technical Arts, it is largely attended.

Higher Education.—A University Association was formed in Adelaide in 1872, and the Act of 1874 created Adelaide University and endowed it generously with land grants. Its faculties in law, medicine, arts, science and music, are open to all creeds and both sexes.

QUEENSLAND.

In their search for a remote post for the more hardened convicts, the authorities of New South Wales hit upon the Queensland coast, and in 1824–6 the first batches of convicts were sent to the Moreton Bay

and Brisbane River district. Despite the opposition of the crown and the deterrent influences of a convict settlement, free settlers poured steadily into the new district, attracted by its excellent pastoral possibilities. In 1842, the crown recognised the new community as the Moreton District of New South Wales, and in 1859 organised it into the colony of Queensland with representative and responsible government. The discovery of valuable minerals, and the development of the sugar and cotton industries as an indirect result of the American Civil War, added greatly to the material prosperity of the colony. A population of 25,000 in 1860 increased to 500,000 at the end of the century.

Until 1859 educational affairs in Queensland followed the course of educational affairs in the mother-colony of New South Wales. State aid with more or less impartiality was distributed among the denominational schools, but only two purely national schools were receiving state aid when the new colony came into existence in 1860.

No Australian colony has been quicker to recognise the obligations of the state to the masses. The Act of 1860 created a Board of Education of five members, with the Minister of Education as presiding officer, to control primary education and distribute the crown grants. Striving to comprehend all existing school organisations the Act classified schools as "vested" and "non-vested." "Vested" schools, in buildings and land, were to be vested in the crown; the crown, on its part, was to provide for one-half, and in special cases two-thirds, the cost of the buildings and equipment, and to maintain the schools. The schools themselves were to be national and secular. "Non-vested" schools were owned and controlled by the churches, chiefly the Roman Cath-

olic and Episcopal churches, and, if taught by licensed teachers and found efficient under inspection, were to receive grants-in-aid for the salaries of the teachers and for books and supplies. Subject to the usual conscience clause, these schools might be sectarian. All schools might exact tuition fees.

Although school attendance in Australia can never be as satisfactory as in the thickly populated countries of Europe, Australians have never shunned sacrifices to secure regular and universal attendance. In 1870—just ten years after it became a separate colony—Queensland abolished all fees in the vested schools and made good the loss by increased grants from the crown. To enlarge the school accommodations, it reduced in 1873 the local proportion of the original cost of buildings and equipment—often an intolerable proportion—to one-third, and in special cases even to less, and increased proportionately the crown's share. And when the resulting expansion of the school system forced the Board of Education to classify the schools and teachers more minutely, it bore, without questioning, the increased cost of the classification.

Despite the growth of the "vested" schools, however, the "non-vested" schools persisted, and the semi-irresponsible Board of Education contributed to this persistence. For fifteen years the democracy of the colony agitated, and at last, in 1875, forced a recognition of its demands. The Board was replaced by a responsible minister of the crown as secretary of the Department of Public Instruction. State aid was to be withdrawn from "non-vested" schools after 1880, and more generous support was to be offered the "vested," or national, schools. Hereafter the state should bear four-fifths of the cost of buildings and equipment, and the total cost of maintenance. More-

over, it should offer special aid to provisional schools, organised in rented buildings in remote districts under special teachers, and to itinerant schools, the prototypes of the later part-time schools.

The course of instruction, including, with the usual elementary subjects, grammar, history, geography, mechanics, drill, music, sewing, and (later) drawing, must be wholly unsectarian. Subject to the usual exemptions attendance was to be compulsory between the ages of six and twelve for at least 120 days per year in the districts where the compulsory clause was put into force by special proclamation. It speaks much for the influences that control modern democracies that the clause has never yet been proclaimed, and is practically inoperative.

There followed the usual quasi-recognition of local authority. The Act of 1875 permitted each school district to elect a school committee of five members to report upon and direct urgent repairs, to inspect registers, to supervise the attendance and, in a general way, the conduct of the schools.

Few changes have been made since 1875 in the method of organising and conducting provisional and state schools. Provisional schools are kept in repair by the local subscribers, but the state may aid in the organisation of these schools by a grant of one-half the cost, or not more than £50. Their maintenance rests wholly with the state. Part-time schools are conducted as elsewhere in Australia. The relative importance of the various classes of schools is seen in the numbers. In 1899 there were 412 state schools in Queensland, 469 provisional schools, and 22 part-time schools. It may be well to add here that there are 173 private schools in Queensland, attended by about one-tenth of the school children of the colony. Inspection is carefully organised. Each pri-

mary school is inspected twice a year, once for general inspectoral purposes, and once solely for examination and promotion purposes. Private or church schools may seek the services of a public inspector, and all inspected schools may compete for state scholarships.

Teachers are ranked as classified teachers, unclassified teachers, and pupil-teachers. The Governor in Council appoints the "classified" teachers, the Secretary of Public Instruction, the "unclassified," and the pupil-teachers. Only the "classified" may be principals or assistants, but on passing certain state examinations the "unclassified" may become the "classified." Promotion among the "classified" teachers (there are eight classes of public schools and eight grades of salaries) depends upon the teacher's experience and skill, and upon his certificate. While the salaries of the "classified" teachers are fixed, those of the "unclassified" are subject to the special recommendation of the Secretary of Public Instruction. Pupil-teachers form an important part, too important, perhaps—of the teaching staff of Queensland. Their four-years' course of training includes four classes separated by annual examinations, the subjects of which are not specifically pedagogical.

Nothing can be said here of kindergartens, infant schools, continuation classes and normal schools. Queensland has none. Exhausted by recent financial troubles, the colony has given all its strength to the development of the ordinary primary schools.

Secondary Education.—Since 1897 extra-subjects have been added to the elementary course of the primary schools, but the popular objection to too extensive a public-school course, aided by the inspectors' opposition to the dissipation of teaching energy over many subjects, has defeated the purpose of the addi-

tion. The Grammar School Act of 1860 offered a state grant of £2,000 towards the site and buildings of a Grammar School to any locality which would provide £1,000 by local subscriptions. The grammar school itself should be controlled by a Special Board, a majority of whose members should be crown-nominated. Subject to the crown's approval, this Board should fix fees, salaries, and courses of study, and, in general, should administer the affairs of the school. In 1864 the Act was so amended as to permit the state to aid in the maintenance of secondary schools where the locality has provided generously for site and buildings. It was further provided that the Board of Education might offer scholarships, tenable in secondary schools, to students in the primary schools. In 1873 these scholarships, which consisted partly of free tuition and partly of maintenance, were made open to competition throughout the colony. To remove the severity of this provision upon the poorer primary schools, an amendment of 1895 distributed the scholarships on a geographical basis, and a more recent amendment of 1898 reclassified them as scholarships open to all schools, or open only to the state schools, and as scholarships for secondary schools, for the Agricultural College, and for a university training.

Higher Education.—Scholarships allotted to the universities are tenable in any British university. Hitherto Sydney, Melbourne, Oxford, and Cambridge have enrolled the majority of the scholarship-holders. In 1870 London University was authorised to conduct university examinations in Queensland. In 1891 a Special Commission was appointed to inquire into the organisation of higher education in the colony. The favourable report of this Commission awaits the tardy action of the state.

Technical Education.—Drawing and sewing represent the beginning of technical instruction in the primary schools. The art classes organised in various urban centres by local committees, and aided generously by the crown, have recently been supplemented by special classes in technical or scientific subjects. Of these the best known are held in Rockhampton, Townesville, Ipswich, and Toowoomba, while the best-known school is the Metropolitan Technical School at Brisbane. Perhaps the most hopeful of the technical schools of the colony is the Queensland Agricultural College, founded in 1897 near Brisbane. With its experimental farms, its laboratories, and its well-conducted course in the science and practice of agriculture, this school will exercise a great influence on the future of the colony.

CHAPTER XVI.

THE KINDERGARTEN.

ALTHOUGH considerable attention has necessarily been given to kindergarten teaching in connection with the educational systems of Europe and the United States, so important is this phase of nineteenth century instruction, that it is deemed necessary to give a separate brief study to this subject.

Johann Heinrich Pestalozzi (1746-1827) paved the way for Froebel's great work; without Pestalozzi Froebel had hardly been possible. Pestalozzi was a visionary; in many ways an impracticable dreamer, but he was one of the first to see that if education were on a more natural basis society would be uplifted and many of the evils infecting humanity would vanish. He was first moved to practical endeavour by reading Rousseau's *Emile*, and under the influence of this celebrated book opened an industrial school for the poor. After five years' work the school proved a failure, but Pestalozzi lost none of his enthusiasm, and when the opportunity presented itself some eighteen years later to establish a somewhat similar institution at Stanz, a town on Lake Lucerne, he went at his work with all the energy of his early youth. In this establishment he was without books or apparatus, but it is said that in a few months he succeeded in elevating the physical, mental, and moral condition

of his pupils. A year after beginning his work at Stanz he became assistant teacher at a school at Burgdorf, and worked with a "sacred zeal" and "devoted love" that won the hearts of all his pupils. But it was not until 1805 when he opened the celebrated school at Yverdun that his system of education became widely known. Students flocked to him, teachers came for instruction in his methods, and enthusiasts made pilgrimages to his institution.

The vital principle of his system was a simple one: "the natural, progressive, and symmetrical development of all the powers and faculties of the human being."

He based his teaching on the facts that "spontaneity and self-activity are the necessary conditions under which the mind educates itself, and gains power and independence," that "knowing and doing must proceed together. The chief aim of education is the development of the learner's powers," and that "all education must be based on the learner's own observation—on his own personal experience."

Herein is the root of all modern education and in the hands of Friedrich Froebel, Pestalozzi's great follower and pupil, the plant thus firmly rooted was to bear excellent fruit.

Friedrich Froebel, who stands first among the men who have contributed of their genius to the advancement of elementary education, was born at Oberweissbach in the Thuringian Forest in 1782. In early life he was left much to himself, and nature took the sensitive child in hand and he was educated by contact with the trees and the flowers, with the lowing of cattle and the songs of birds, with the brawling of cataracts and the babbling of brooks. He was considered a lazy and stupid boy at school and unworthy of a higher education; and so, at the age of fifteen, he was

apprenticed to a forester. The desire to know was upon him, and he read diligently the forester's books, and books he borrowed from a sympathetic physician in the vicinity of his home, and lived close to nature's heart. His mind was now thoroughly awake and he desired further knowledge. To this end he entered the University of Jena in 1799. He was poor and lacked wisdom, and falling into debt while at college suffered imprisonment for nine weeks.

For four or five years Froebel tried his hand at various employments, and in 1805 went to Frankfort to study architecture. While in this place the principal of a model school persuaded him to accept a position as teacher. He now realised that he had found his true vocation. After two years at this work he resigned to undertake the education of three lads. With these boys he went to Yverdon to work and study with Pestalozzi. From 1807 to 1809 he was practically a pupil of Pestalozzi, whose teaching he was afterwards to develop. There was a break in his educational career in 1813, when he joined Lutzow's corps and served through the campaign of that year; and yet it was no break,—he was still a student and learned in this severe school the need of discipline and united action.

After the Peace of Fontainebleau Froebel served for several years under Professor Weiss as curator of the Museum in Berlin. But the new education was uppermost in his mind, and he unselfishly gave up his position and set out on foot for Griesheim to undertake the education of some orphan nephews; and as several other pupils were added he requested Midden-dorf and Langethal, two younger men, who had been attracted to him during the campaign of 1813, to come and assist him in his work. The school was moved to Keilheu, and here Froebel, Langethal, Midden-

dorf, and Barop, formed an educational community; their faith was great, and for fourteen years they struggled on, often in such poverty that they were scarcely able to obtain the necessities of life.

In 1840 he opened at Blankenburg the first kindergarten, in which he said he would endeavour to convert children's activities, energies, amusements, occupations, all that goes by the name of play, into instruments for his purpose, and, therefore, transform play into work. This work would be education in the true sense of the term. The kindergarten was a kind of play school, a "garden of children," for furthering "the physical, moral and intellectual growth of children between the ages of three and seven." He recognised, as Wordsworth had already done in his immortal ode on *Intimations of Immortality from Recollections of Early Childhood*, that the occupation of children was "endless imitation" and by emphasising this in games in which they could imitate objects in nature and the actions of their elders their capacity for feeling and thinking would be increased and their minds stimulated to invent and create. The leading trait in youth was, he saw, "restlessness." The young needed companionship, sympathy, and occupation. He would bring them together into little communities, human gardens, and have over them superintendents who would be true child-gardeners, directing their mental growth and causing the sunlight of play to so shine upon them that they would become beautiful and strong. Social games and games that would interpret nature were invented by Froebel, and in them the utmost care was taken to adequately train the senses of the children. In order to cultivate a sense of rhythm and sound and motion, music and poetry played an important part in the games. Children, too, were not to be too closely con-

fined, but were to spend much of their time in the open air, and as far as possible each child was to tend a little garden. His object was "to give children employment in agreement with their whole nature, to strengthen their bodies, to exercise their senses, to engage their awakening mind, and through their senses to make them acquainted with nature and their fellow creatures; it is especially to guide aright the heart and the affections, and to lead them to the original ground of all life, to unity with themselves."

*"The leading ideas in Froebel's educational system have been summed up as follows:

"1. The task of education is to assist natural development towards its destined end. As the child's development begins with its first breath, so must its education also.

"2. As the beginning gives a bias to the whole after-development, so the early beginnings of education are of most importance.

"3. The spiritual and physical development do not go on separately in childhood, but the two are closely bound up with each other.

"4. Early education must deal directly with the physical development, and influence the spiritual development through the exercise of the senses.

"5. The right mode of procedure in the exercise of these organs is indicated by nature in the utterances of the child's instincts, and through these alone can a natural basis of education be found.

"6. The instincts of the child, as a being destined to become reasonable, express not only physical, but also spiritual wants. Education has to satisfy both.

"7. The development of the limbs by means of movement is the first that takes place, and therefore claims our first attention.

"8. Physical impressions are at the beginning of life the only possible medium for awakening the child's soul. These impressions should, therefore, be regulated as systematically as is the care of the body, and not be left to chance."

Froebel, in propagating his ideas did not by any means find his path all roses; indeed, it was thickly strewn with thorns. For eight years he struggled against great difficulties in his school at Blankenburg, but finally had to close it for want of funds. In 1851 he was to receive a still severer blow. He had hoped, and indeed had made an appeal for state help, but the Prussian government in that year declared that "schools founded on Froebel's principles or principles like them could not be allowed."

He had, however, several years before this, attracted to his educational endeavors the attention of a noble and philanthropic woman, the Baroness Marenholtz-Bülow, who was to be the great propagandist of his system of education.

Although the Prussian government had for the time being checked the spread of Froebelism, it was soon to become popular throughout the civilised world. Froebel died in 1852, and so wide was his influence about that time that, in 1854, the Ronges introduced the kindergarten into England, and in the same year Henry Barnard, in his report on education to the government of Connecticut, said that he believed Froebel's method to be "by far the most original, attractive and philosophic form of infant development" the world had yet seen. The Baroness Marenholtz-Bülow influenced the French, those enthusiasts for new ideas, and they took hold of the kindergarten, and by 1881 there were a number of successful schools in France. Through the influence of another enthusiastic woman, Madame Salis-Schwabe, who deplored

the illiteracy of the poor in her country, the kindergarten was introduced into Italy in 1881. Austria and Belgium and other European countries now have their kindergartens; but the system has received widest attention and its best development in America. The work in the United States has already been touched on in the chapter dealing with education in that country, and the leaders in the kindergarten movement mentioned; but the following passage from the preface by W. T. Harris to Susan E. Blow's *Symbolic Education* admirably shows the wonderful advance made along the lines of Froebel's system.

"The kindergarten constantly gains ground in the United States as well as in Europe. In 1892 an inquiry sent out from the Bureau of Education obtained information of the existence of 2,000 private kindergartens, and 459 public kindergartens. Of the former, 1,148 failed to respond to the inquiry sent them. The 852 private kindergartens that reported had 1,602 teachers and 33,637 pupils. The 459 public kindergartens reported 933 teachers and 31,659 pupils enrolled during the year. The returns showed a total of nearly 2,500 kindergartens, with an enrollment of 65,296 pupils in the 1,311 that reported.

"According to the reports from year to year there were in 1873, so far as could be learned, 42 kindergartens, 73 teachers, 1,252 pupils.

"Five years later [1878] these had increased to 159 kindergartens, 376 teachers, 4,797 pupils.

"In 1882 there were reported 348 kindergartens, 814 teachers, 16,916 pupils.

"In 1888, 521 kindergartens, 1,202 teachers, 31,227 pupils.

"In 1892, as above stated, reports were received from 1,311 kindergartens, having 2,535 teachers, and 65,296 pupils, and the addresses of nearly as many

more were obtained which failed to make reports when asked. It may be safe to estimate the number of kindergartens at 3,000, the teachers at 5,000, and the pupils at 100,000."

The "new education" of Froebel has been more far reaching than would at first sight appear. It has brought with it "a new leaven" that is making its influence felt through all grades of education. It rang the death-knell of the pedant, and in public school, high school, and university, the nature-method of Froebel is superseding the old methods that seemed to look upon the child-mind merely as a receptacle for words and facts.

CHAPTER XVII.

PLAY AS AN EDUCATIONAL FACTOR.

THE educational value of play, and its systematic utilisation in pedagogy, has had much more attention in Europe than in America. In Froebel's kindergarten play is considered of vital importance, but lately a movement has been set afoot of establishing public playgrounds in city parks, and also connecting play with gymnastics in schools of lower and secondary grade. Educators are apt to bestow more attention to the intellectual value than to the biological importance of play. Play, in youth, is of greater value than the possession of a large number of complete instincts implanted by education. Just because play is not a thing forced by necessity, and is not a mechanical, but a free, joyous activity of all the powers of the child, it is more apt, than anything else, to educate the whole child. While instruction may strengthen inborn powers, play will apply these powers in an independent manner; the exercise of both the sensory and motor apparatus, or organs, aids the development of emotional and intellectual powers.

With the development of inborn faculties, play offers another advantage, namely, the acquaintance with the realities of the world. During play, the child takes in much more of the rich and varied contents of the world surrounding him than we give him credit for, and what is more, he learns to accom-

moderate himself to these realities. Preyer says: "It is not conceivable, how many human beings have gained their everyday knowledge through childish play."

The child in play becomes acquainted with tones and colors, forms and events of the world. Elementary laws of nature are learned in play, and live nature becomes familiar through play and imitation. Above all, the contents of the human life, the variety of human occupations, and many human events, are first learned through play, or if not learned, they are at least anticipated.

We see from this, that play gives the formation for moral character building. Both individual and social education are enhanced through play. The individual learns to repress his exuberant powers under uniform moral laws, and learns to become of valuable service to the social whole. All human virtues can be strengthened in play; all vices repressed. At an early age, the child learns, through play, that he is a part of a social whole, that it will not do for him to separate himself from others, and that all noble aims can be reached better in unison with others. The child learns that joy in play is only possible, if all are willing to obey the rules of the play. He learns to measure himself and his strength with others, learns to understand and esteem others, learns to bow willingly before authority. Under certain circumstances, play will even show him, what he can do best in the service of others. Above all, play teaches him self-assertion, without which, no moral independence is possible. Play subjects the child to teasing and harmless mockery, and thereby teaches him modesty and self-possession. Of course, whenever liberty and self-government are allowed, as in play, many dangers are attendant, but in most cases,

play itself counterbalances these dangers. It must be remembered always, that between free play and moral obligation emanating from the rules of the school and authority of superiors, the former is the greater agency of the two. In the playing of children we see very plainly the difference between personal revenge and social justice. Against the violator of an unwritten law there arises a spontaneous feeling, which resembles the desire for revenge, but has already underlying it the idea of an outraged community.

In imitating social occupations, that of father, mother, teacher and others, the child becomes acquainted with ethical estimations of work and occupation.

Education and Play.—Play cannot develop its full value for the child, unless it be conducted or directed properly by adults. Of course, the first warning is: Do not direct too much. It is one of the essential characteristics of play, that it should afford free movement. This essential is annihilated when liberty in forming games is curbed too much. Jean Paul said: "I am afraid of every adult hair-covered hand or fist, which touches the tender pollen of child-flowers, knocking off the colour here or there, which might develop into glorious flowers." Therefore all attempts to systematise the various forces of man, to a methodical school of play, contradict the essential quality of play. In this point many of the meritorious efforts of Froebel are woefully erroneous. They contain too much of reflection, too much moralising, and therefore spoil the naïveté of the child's play. But if we advocate liberty in play, we do not dispense the parents of the double duty of promoting play and supervising it.

Even the animal mother induces her young to

play, and she does it by participating in it. Human parents and educators should likewise take part in the play of their children; this is particularly advisable with small and lonesome children. There is, however, a danger of accustoming the children to the participation of adults in their play; tact is needed to determine the extent of the participation of adults. With older children participation of adults in play must ever remain a special favour. In most cases mere suggestions are sufficient. Admiration and praise of the efforts shown must be very scarce. In making suggestions, of course, the great wealth of traditional games is resorted to first, but also new features may be added to old games, and new games may be invented.

In itself, every game is right, provided it has the value mentioned before. It is wrong to exclude, with moral pedantry, entire types of games, as for instance, games for gain or loss, for these offer chances to gain the wholesome exercise of accepting the vicissitudes of fate with humour and contentment. There is, of course, in proposing games this one principle to be considered: Whatever game is proposed should be adapted to the age and temperament of the child, but it should always be suggested and never demanded as a duty.

When a child rejects all suggestions of play, it is best to let him suffer the punishment of his own tediousness rather than to force him to play. The assistance on the part of the adult in the play of children should not degenerate into relieving the child of the burdens of play. At any rate the aim of play should always be to allow the child the greatest possible amount of liberty and room for creative activity.

For the play of the individual, the suggestive activity of the adult may be nothing but the handing of

the toy ; but even in this educational wisdom has two principles, the violation of which will kill play : First, do not give too many toys ; second, do not give toys that will kill imagination. Horace Mann once wrote : " A toy is a good toy only after it is broken and gives the child opportunity for make-believe." Against accumulation of toys, healthy children re-act, by simply laying them aside ; with others, the plenitude rapidly causes displeasure and inconstancy. Complicated toys, such as steam engines, cars, full-rigged ships, and the like, are toys which leave not sufficient room for imagination and creative activity. The child like an inexorable judge, judges of them by destroying or damaging them. On the other hand, toys consisting of sticks, cubes and balls, fail to give enough matter for imagination and creative activity. It must be remembered, that all toys must have the character of the elements of play ; therefore, let us not forget raw material, especially the sand. Jean Paul says : " Sand is an inexhaustible source of amusement," and he sings for it a song of praise. Water also in its various forms, as snow, ice, waves of the sea, river, brook and puddle, even the water in the tub, or watering-can, and the goblet, is a toy of marvellous attraction for children, revealing ever a new wealth of suggestions. The air, likewise, which carries the kite, waves the flag, drives the windmill, and pushes the ship, is a source of amusement for children. Fire also has an irresistible charm for children, but it can only be used under strict surveillance.

Most of the artistic toys have a tradition as old as the hills. Building-blocks serve the creative ability of the child. Games of motion are suggested by the hobby-horse, the ball, the hoop, the rope, the top, the whip, the bowling-ball, the swing, the stilts, sled and skates. For games of imitation, figures and scenes

from the animal world serve best; also imitation of the human social world, with its occupations and labours. It is hardly necessary to mention them. It is very advisable to give children tools in miniature, which will aid them in work, such as shovel, spade, hammer, saw, dishes and pots. They gradually familiarise the child with the use of tools, a most desirable acquisition for any child rich or poor. And then, we may mention the aids for artistic creation: pencils, brushes and colour-boxes, clay and modelling wax. Of course the sketch picture-book, which is to be coloured, has a legitimate place in this list.

Inducing children to play and promoting play is not all the adult can do. He must also add the element of discipline. The educator must not only keep away what is harmful from the child, but he must also exclude what is morally dangerous in play. Some children show, in consequence of playing too much, a great flightiness in all kinds of legitimate work; some show a dangerous passion for play, which increases almost to intoxication. In every such case, a change in the toy, or in the nature of the games, may be sufficient to curb the excrescences. It is an admirable means for discipline to prohibit play at times. There are children who would much rather be beaten than be forbidden to play. There are other dangers in play. A tendency to destruction is one, the other is the rapid growth of stubbornness and egotism. In social games, selfishness attempts to rule, and similar unpleasant vices will crop out. In games of war the character of play is often destroyed by passionate language and coarse, rough actions.

The liberty of play must have a double limit in (a) duty of obedience, (b) in work. The former must from the very beginning stand there like an unscalable wall, and concerning the second it must be in-

sisted upon that the child must gradually learn the difference between work and play. He is to see and become clearly conscious of the fact that he *must* work, but *may* play. In the first occupations of work given to children, first, of course, in the interest of play, it is well to awaken the consciousness, that he is engaging in occupations, which he may not take up or throw aside at will, but which must be completed in order to be released from them. The more clearly the labour task is taught, the better the child will be prepared for school. Side by side with these labour tasks, the greatest possible amount of liberty and joy is to be allowed for play. Thus, the freshness, novelty and originality of the play is preserved and the child's innate powers are thus fostered by the two impelling forces, work and play.

CHAPTER XVIII.

SCHOOL GARDENS IN EUROPE.

"SCHOOL GARDENS" in the narrower sense of the term, are a very recent institution; but, when considered as including all gardens serving the purpose of instruction, we can only endorse the expression of Ben Akiba that "there is nothing new under the sun;" in a comprehensive sense, school gardens cease to be a modern institution.

History teaches that the great Persian king, Cyrus the Elder (559-529 B. C.), laid off the first school gardens in Persia in which the sons of noblemen were instructed in horticulture. King Solomon (1015 B. C.), likewise, possessed extensive gardens in which all kinds of plants were grown, probably for instruction, "from the cedars of Lebanon to the hyssop which grows out from the wall."

The botanical gardens of universities belong to school gardens in the broader acceptation of the term. The first one to establish a garden of this kind was Gaspar de Gabriel, a rich Italian nobleman, who, in 1525 A. D., laid the first out in Toscana. Many Italian cities, Venice, Milan and Naples, followed this example; Pope Pius V., (1566-1572) established one in Bologna, and Duke Francis of Toscana (1574-87), one in Florence. At that time almost every important city in Italy possessed its botanical garden.

The renowned educator, Amos Comenius (1592-1671), in his great treatise on education, maintains

“that a garden should be connected with every school, where children at times can leisurely gaze on trees, flowers and herbs, and be taught to enjoy them.” In Germany, August Hermann Francke established a school garden at Halle in 1695, in connection with his orphan asylum; the orphans were occupied with garden work during their leisure. In France, J. J. Rousseau (1712–1778) advanced the school garden idea in his “*Émile*,” published in 1762, in which he points out the importance of garden work as an educational factor. The philanthropists Basedow, Campe and Salzmann likewise included school gardens among educational means. Campe together with his wards, planted in the neighbourhood of 10,000 trees during his lifetime. Salzmann writes concerning this subject: “School gardens have been laid out neither to draw the attention of passers-by, nor to derive great returns, but to instruct.” Pestalozzi himself (1746–1827) was a farmer for a long time, and occupied his wards at Neu Hof with fields and garden work. “I wish,” said he, “to make my estate the central point of my agricultural and pedagogical efforts. The children are to be kept, and to be instructed, at work.”

The school garden idea was further advanced by Froebel, who founded the first kindergarten at Blankenburg in Thuringia, in 1840, and recommended light gardening for the larger children in connection with the play of the younger ones. Besides kindergartens, the first school gardens were established in the larger German cities at this time; in 1848, one was connected with the advanced school for girls in Worms. Dr. V. Stoy, of Jena, possessed a garden connected with his educational institution from 1855, that was of the greatest use to him for instruction.

With regard to schools in general, however, these

isolated attempts are of little significance, since they affected only private educational institutions and higher schools.

School gardens entered on a new stage of development when their establishment in connection with rural elementary schools especially was required by law. This first occurred in Austria. The Austrian Imperial School Law of March 14th, 1869, defines in § 63 that "where practicable a garden and a place for agricultural experiments shall be established at every rural school." A supplementary regulation of August 20, 1870, furthermore requires that instruction in natural history shall be given in an appropriately arranged school garden. At the Vienna exposition in 1873, a schoolhouse with a perfectly equipped garden was exhibited; this not only gave expression to the new idea, but stimulated further progress.

Professor Erasmus Schwab may be considered the actual founder of elementary school gardens in Austria, although single gardens existed before his time; as, for instance, that of Neunkirchen laid out as early as 1700. Others deserving of merit in their efforts in behalf of developing the school garden idea are: Professor Alexander Mell of Marburg; Dr. Francis Langauer, of Vienna, teacher and editor of the "School Garden" (1885-91); Francis Susnik, of Vienna, teacher; Frederick Staudinger, of Graz, teacher; etc. In Austro-Hungary, the classical land of school gardens, there are, at present, over 18,000 covering an area of thousands of acres; the most are found in the crown lands of Bohemia (4,500), Moravia (2,000), Lower Austria (1,000), Steiermark (800), Corinthia (300), Silesia (500), and so on. The idea is best developed and exemplified in Styria, where there is no school without a garden. The Hor-

ticultural Society under the presidency of Director Kristof, of Styria, deserves special credit for establishing and developing school gardens which it has always been ready to support. It distributes annually, free of charge, a large supply of cuttings, all kinds of seeds, special varieties of flower and vegetable seeds and the like. At the exposition held in Graz in 1880, it exhibited a complete school garden which received general approval and contributed much toward the spread of this useful institution.

The school garden question has also been alive in Switzerland for about twenty years. The government of the canton of Thurgovia first recommended the establishment of model school gardens in 1879; its example was followed by most of the other cantons, and since June 27, 1884, the Federal government has taken up the question of school gardens, appropriating a yearly sum of 3,500 francs for their establishment. The Agricultural Society of Switzerland recommended the establishment of school gardens since 1881, and gave them powerful support. By different prize circulars and financial aid, it advanced the cause to an unusually great extent. Model school gardens exist now at the normal schools of Schwyz, Küssnacht, Zürich, Berne and Chur, and at different elementary schools as, for instance, in Lichtensteig, Hug, Flomalt, Buchs, Langenau, Lübingen, Zürich, Berne, etc.

Since the war of 1870 to 1871, France has reorganised, improved and developed its school system, in many ways supplying deficiencies. Besides improving the education of teachers, the law of March 18, 1882, defined a course of study for elementary schools that places the first instructions in horticulture and agriculture in the school gardens of the lowest grade; in the middle grade, pupils acquire the knowledge of

kinds of soil, fertilisation and field work; and in the highest grade, they learn farming, agriculture, book-keeping and horticulture. A decree of December 24, 1885, requires that instruction on these subjects be not limited to theory, but be combined with experiments in the school garden. According to another decree of December 11, 1887, no plan of a school building in the country, to which the State contributes, shall be accepted unless a garden is attached. Model school gardens are found at different French seminaries (*écoles normales*); as, for instance, at Besançon, Nancy, Limoges, Rennes, Toulon, Lyons, and so on. After the course of study has been completed, many French seminaries send their pupils to agricultural schools to acquire a practical training in agriculture and horticulture.

In Belgium, the study of horticulture is compulsory. For practical purposes the school law of August 14, 1873, requires that each school shall have a garden of at least 39.54 sq. rds., to be used in connection with instruction in agriculture, botany and horticulture. A royal decree of January 9, 1897, lays special stress on vegetable culture in which female teachers must be sufficiently versed to give theoretical and practical instruction. All elementary schools in Belgium have gardens and the government expends 6,000 francs annually as prizes among pupils who have excelled in this department of study.

Naturally the English with their sense for the practical, attach great importance to manual labour and agriculture. The State occupies itself very little with this part of the education of youth, especially after school-age; local organisations receive support from the state, however, for the further instruction of those who have left school. These societies establish so-called continuation schools, not only for commerce

and industry, but for agriculture and horticulture. Since 1892, gardens have been established in connection with these schools which serve for theoretical and practical instruction. Besides being present at instruction, pupils are put in charge of special beds; during the course of the summer, their efforts are examined at different times by a commission and prizes are awarded for the best work. Teachers equip themselves for this department of study by attending lectures that are given free by agricultural societies.

In Sweden an interest in school gardens has been manifested for many years, nearly as early as in Austria. A royal circular of October 15, 1869, required gardens averaging from 79.07 sq. rds. to 158.14 sq. rds. to be appropriately laid out. In 1876, Sweden numbered 1,600, in 1880, 2,000, and in 1894, as many as 4,670 school gardens. Of late years this number has sensibly diminished since, in the northern parts of Sweden more importance at present is attached to manual labour, to which the state likewise contributes a large support. The character of the country little adapted to agriculture may be the reason for the lack of attention with respect to school gardens in Norway.

In middle and southern Russia, small farms and gardens are beginning to be attached to the people's schools in many villages for purposes of instruction in horticulture and agriculture. As a rule the community or resident landholders give the required amount of land free. The best developed gardens are found in the province of Yehaterinoslaf in southern Russia; 257 of the 504 schools in this district possess such small modern arrangements, divided into sections for grain, vegetables and fruit, kitchen truck, grapes and mulberry trees for the raising of the silk-worm. In 1895, these schools collectively cultivated 296.52

acres of land including vineyards, and possessed 12,000 fruit trees and over 1,000 beehives.

In Germany, school gardens have not as yet been regulated by law; nevertheless the idea struck root twenty years ago. In some German states, legislation for schools requires or defines it as desirable, that each school shall have a garden; but this is meant to serve more specially for the maintenance of the teacher. It is not so often arranged for purposes of instruction as desirable. The most is done for the cultivation of fruit trees; nearly every teacher in the country possesses a small orchard. In the larger cities gardens are occasionally established to furnish the plants required for instruction in natural history. Such gardens, in which only certain kinds of plants are cultivated, are called partial school gardens. To provide pupils with plants for instruction presents considerable difficulties in cities, and has occasioned the establishment of large gardens. Such central school gardens which furnish plant material to schools, exist in many of the large cities of Europe. The first was established in the "Humboldt-Hain" in Berlin, and covers 9.88 acres. Since 1879, Magdeburg possesses a central school garden in the "Herrenkrugpark," which contains a section of beds of 61.78 acres, 17.30 acres of tree gardens, and 4.94 acres in the botanical division.

Leipzig ranks next in order with an area of 32.12 acres in 1888; in 1889, Breslau possessed 5.14 acres; Mannheim, 4.94 acres in 1890; Cologne, 4.94 acres in 1891; Altona, 3.5 acres in 1891; Karlsruhe, 1.73 acres in 1894; Elberfeld, Kalberg, Stettin, and many others with gardens of greater or less extent. In many cases plants are arranged according to families. In the central school garden of Berlin, the plants are arranged according to geographical zones.

Besides these, numerous smaller gardens have been established in connection with second and elementary schools. In Prussia gardens have existed at the Wilhelms Gymnasium of Berlin since 1875, covering 1.24 acres; "Joachimsthaler Gymnasium" of Berlin since 1884, .37 acres; at the "Friederich Wilhelms Gymnasium" since 1891, .11 acres; at the gymnasia of Wollin since 1888, 7.4 acres; at Bromberg since 1892, .2 acres; at Oldesloe since 1892, .21 acres; at the gymnasium of Witten on the Ruhr since 1891, .14 acres; at the high school of Giessen since 1891, .37 acres; at the normal school of Weissenfels since 1837, .86 acres; besides various normal seminaries and agricultural winter schools. Gardens are connected with people's schools in Hamburg, Wiesbaden, Dartmund, Magdeburg, the suburban cities of Oedenburg and Wenstadt from .07 to .21 acres in size; in Frankfort on the Main, Gerderath in the Rhine province, since 1881, and in many other places.

In Bavaria, gardens are specially numerous in Upper Palatinate; a ministerial decree requires them to be at least .12 acres in size. Special attention is given to the culture of fruit trees. The schools of Munich are provided with plants for purposes of instruction from the botanical gardens of the royal university. In Saxony nearly all seminaries have gardens; as, for instance, those of Oschatz, Auerbach, Schneeberg and so on. Most elementary schools are also provided with gardens, even in large cities as Leipsic and Dresden. At the second international agricultural exposition in Dresden, 1896, the Teachers' Society of Saxony for Nature Study exhibited a complete school garden which received the golden and the State medal.

The kingdom of Würtemberg has proportionately

few gardens for the reason that horticulture has flourished there for centuries. The seminary at Wurtin-gen possesses a garden about .49 acre in size. In the Grand Duchy of Baden conditions are about the same as in Württemberg. Karlsruhe has three small gardens connected with people's schools, and the seminary of Meersburg possesses one of insignificant size. In the Grand Duchy of Hesse gardens have been connected with the seminaries at Alzey and Friedberg since 1886, as also with several people's schools. The schools of Thuringia are better provided. The seminary at Coburg has possessed a garden since 1875, Weimar since 1878, and Schleiz since 1890; the seminaries at Eisenach, Gotha, Rudolstadt, and Greiz likewise have gardens. The gardens connected with people's schools are mostly only partial school gardens; the one at Coburg with an area of .15 acres has existed since 1887; that of Neustadt near Coburg, .62 acres, since 1885; that of Triptis, .49 acres, since 1890; that of Altenburg, since 1892; that of Possneck, .82 acres, since 1895; gardens are connected with the citizens' schools of Yena, .05 acres, Eisenach, Greiz, Schmollu, Ronnenburg, Neustadt and Weida, and with the Lutheran school at Gera. School gardens are also found here and there in the other German states. However, if they are to make any further progress for common benefit, they must be regulated by law and receive support from the state.

CHAPTER XIX.

TECHNICAL EDUCATION.

THE term "technical schools" has a comprehensive and a narrow meaning. The English commonly use it in the widest possible sense. According to this usage, every art and profession having its technique, all institutions teaching a special art, or preparing for a specific profession, are technical schools. Thus, for instance, a theological seminary, or a medical school, might be called as much a technical school, as a weavers' school in Saxony, or a watchmakers' school in Switzerland may lay claim to that term.

In the continental European countries, and in the United States, the term, technical education, is used in a narrower sense. When an institution is intended to convey the technique of a single art, such as a trade school, or a commercial school, or a mining college, it is called a *monotechnical* school. When it teaches techniques of a variety of arts, such as architecture, civil engineering, mechanical engineering, chemistry, physics and others, it is called a *polytechnical* institute. It is, perhaps, best to apply the continental application. All schools, *mono* or *polytechnical*, and also agricultural, industrial and commercial, are sometimes, and very justly, classed under the term "*special schools*." This term is used in contradistinction to general educational institutions, which are

intended for general culture, not for any specific occupation or profession.

Under the term, technical schools, may be classed :

(1) *The Polytechnical.*—These offer the highest type of technical education. They rank with the universities in Europe, and lately claim the privilege, heretofore held by them only, of conferring academic degrees. It is only a question of time, when this demand will be granted. The best schools of this kind are the “*École Polytechnique*,” in Paris; the “*Polytechnicum*,” in Zürich; the “*Technological University*,” Charlottenburg, Berlin; and the “*Polytechnical Institute*,” of Vienna. While the school in Paris numbers only from two to three hundred students, the other three institutions range between two and four thousand each. Germany has nine of such institutions.

(2) There are also *secondary technical schools*, most of which rank with high and preparatory schools. They are mostly monoteknical, giving the technique of one, or possibly two, arts. They are either purely technical, such as industrial and trade schools, or attempt both special and general training. No country or state on the face of the globe is so rich in special schools of all kinds as the kingdom of Saxony in Germany, but these institutions have nearly all been established during the latter part of the nineteenth century. The best schools of this kind, at least the most popular, are those of Chemnitz in Saxony and Winterthur in Switzerland. Statistics of such schools are not easily available because they are of such recent origin, and, moreover, have been established by such different authorities and in obedience to such a variety of needs, that a classification is hardly possible. Suffice it to say, that these special schools of a secondary character, are enlisting the attention of European

school authorities. The State governments are beginning to subsidise them very amply and boards of trade and city authorities aid them very materially. To use an analogy, they stand in the same relation to the body educational as the English secondary schools to the other schools in England; that is to say, they are not yet part and parcel of the general educational scheme of the state.

(3) *Technical Schools of an Elementary Grade.*—These schools are almost wholly unknown in America and England, but on the continent of Europe the parental care of the governments has called into existence a system of educational institutions, unique but very effective. The boys and girls of the elementary schools are required to attend evening and holiday schools, which are designed to prevent them from losing the benefits of their elementary education, and prepare themselves for occupations in life. This is the reason why these special schools are called variously: Continuation Schools, Supplementary Schools, Apprentice Schools, Drawing Schools, Trade Schools, Agricultural Schools (in the rural districts). All these elementary special schools are within the scheme and system of the educational efforts of the State. The support of the elementary, technical or special schools is derived both from state and communal exchequers. Usually it is arranged in this way: The community furnishes the school building and appliances as well as material used in workshops, while the State pays all salaries.

We see from the foregoing statements, that there is a vital difference between the more liberal and republican form of government in England and America, on the one hand, and the continental governments on the other. The governments on the European continent, centralized as their efforts in behalf of edu-

cation are, can quickly supply the demand of any locality or province, while in republican countries it is first necessary to form public opinion for the purpose, and that takes time.

Technical education fostered in special schools was not thought of in former centuries, nor during the first half of the nineteenth century. International trade competition first established the necessity of special preparation for industrial pursuit through the agency of schools. Again, as in other chapters, we are obliged to go to Germany for the beginning of the movement. When, in 1806, Napoleon defeated the army of Prussia, and the proud state of Frederick tumbled into ruins, like a house of cards, the Prussian government, prompted by patriotic men like Stein and Fichte, and by Queen Louisa, resolved to regain its power by regenerating the nation, by quickening the intelligence of the people, and awakening political consciousness and national feeling through systematic public education. The result was magical, and the effect is visible to-day in the records of achievements, beginning with the battle at the Katzbach and ending at Waterloo, and latterly repeated at Sedan. Since 1871, it has become proverbial that the schoolmasters of a nation win its battles.

This historical example of a national recuperation or regeneration through the consistent education of the whole people, has since been imitated by other nations, and always with success.

When, in 1876, at the World's Fair in Philadelphia, Germany found herself ignominiously beaten by other nations in the field of art and industry, the courageous German commissioner, Professor Reuleaux, cabled to Prince Bismarck: "Our goods are cheap but wretched." This determined the governments of the twenty-six German states to try the

Prussian method of regaining lost ground by means of educating the people. The result of this educational campaign in less than thirty years far surpassed the most extravagant expectations. The World's Fair in Chicago proved conclusively that Germany occupies a place in the front rank of industrial nations. In twenty years Germany doubled her exports, and lifted herself to a point of vantage equal to that at which England started in 1846. In twenty years, she has attained an industrial development on a par with that of England in practically every line of manufacturing, in many lines surpassing it. How was it brought about?

At first the various governments of Germany proceeded by setting afoot a number of inquiries into the causes of the evident inferiority, and found (1) that the requisite technical knowledge was wanting among the labourers; (2) that every industry, if successful in the world's markets, relies upon the technical knowledge and ability accumulated in a community by years of skilled labour, not to say transmitted from father to son; hence, that special excellence in any branch of industry is the result of both technical schooling and acquired skill. Instances are the cutlery industry at Solingen, the silk industry at Crefeld, the toy industry in Thuringia and Saxony, and the furniture industry at Berlin. Indisputable evidences were furnished to prove that each kind of industry needs a special trade school that can perpetuate and transmit the excellences of former generations, and induce its pupils to invent new processes, and develop new ideas in the pursuit of certain specific lines. Hence the expenditure of millions of dollars in the establishment and maintenance of a system of technical schools that have become models for other nations.

It was deemed unwise to introduce purely technical work into the common school, but efforts were made to draw into the sphere of influence of a systematic industrial training boys and girls who had passed through the common school; hence all schools for special training admit only students over fourteen years of age. It is authoritatively stated that in large German cities the opportunities that were offered, were equalled by the eagerness to learn.

As was said before, it is difficult to present the status of this system of technical education in statistical form. All such presentations must necessarily remain fragmentary. Perhaps the next century will bring order into this apparent chaos.

The development of the entire educational system, which has increased at a rapid rate and in a most satisfactory manner in recent decades, has resulted in a division of labour, owing to the ever-increasing amount of knowledge and skill to be gained, and this has caused the establishment of many kinds of professional and technical schools which lay more stress upon special and less stress upon general education. These schools, obedient to the urgent social demands of the time, have become a very important factor of the educational agencies of the modern nations. They are intended to give a special training which formerly was rarely offered in schools, and it is expected to be done in the shortest possible period, with the least expenditure of money, and upon a basis of a brief preparatory study.

There is little doubt that these institutions meet the requirements in regard to special or technical training; for private persons, as well as municipal and State authorities, continue establishing schools of this kind, and their graduates are generally found to meet the requirements of practical life. But quite

another question is whether these schools are truly educating their students.

It is a postulate of pedagogy that every kind of instruction—hence, special, technical, or professional instruction not excepted—has an educational influence. Every school must have a twofold object, (1) to give technical knowledge and train the intellect, and (2) to ennoble the soul and establish character. In this latter sense all instruction may be educative, if it be good and in accordance with the proper spirit, but it is nevertheless essential in special schools to keep in mind the distinction between mere instruction and educative instruction.

The demand for education or ethical training, and the endeavour to give it much room without infringing upon the purely technical training, have become more important since the changed social conditions have laid upon the school duties which the family and home used to perform—that is to say, ideas of morality, good manners, and public spirit are expected to be inculcated by school education. Under the pressure of business and in the haste with which everything is done, and must be done, the home has lost its influence upon the young generation, and the school is asked to supply that ethical training which will make good men and women of our boys and girls. Hence every school must make it an object of its work to offer both, teaching the intellect and training the will.

It is plain that special schools must not stand aside in this; that they, like all other educational institutions, must aim at an education which is following certain higher considerations than how best to enable their students to earn their living. They should aim at ethical perfection of their pupils, at ennobling and training of their characters, at the education of a

generation filled with public spirit and patriotism, a sense of true humanity, justice, and regard for the law, faithfulness to principles and constancy in action. In fact these schools, certainly no less than other schools, should aim at all those virtues which make good men first before they think of becoming good merchants.

There are a great number of educational momenta to be considered, not to speak of what these schools as such may demand of their students. Obedience to orders, attention, courtesy, truthfulness, regularity—virtues which are conditions of every healthy school organisation.

At the first glance it would seem as though such ideas could only be taught in connection with religion and history, but the best occasions after all are those which the teaching of the mother tongue offers. It is therefore very essential for students to have a “reader” (text-book for reading), which contains suitable matter for ethical instruction. It has often been said that the reader in the classroom is the centre of instruction. This book is not superfluous for special schools. It may offer numerous occasions for ethical instruction, which without such a book might never be given. By means of analogy the interest of the students may be awakened in events outside of home and school. The various institutions of charity, which, following the humane spirit of the times, are established by State and community, may arouse the students to an early consideration of public affairs, so that the blighting egotism, so easily engendered by the study of commercial branches, may be counteracted by influences which will aid in making good, public-spirited citizens of the young. The reader may give the starting point for lessons which bookkeeping, arithmetic, and similar technical

branches cannot give. Yet even the purely technical branches should be pressed into service of the one supreme object of the school: to make good men and good citizens.

In connection with this it is interesting to quote a United States consular report on the elementary continuation or supplementary schools in Saxony, Germany.

“In the following report I have tried to explain the work of the further-developing, or supplementary schools, in Saxony and to impress upon our educators the importance of this branch of training. The supplementary schools are for the people who have to work what Chautauquas, summer schools, and university extensions are for others. These supplementary schools in Germany are not very old, but antedate such efforts in America. I believe they suggested the latter. In 1873 Saxony's supplementary schools were put under a law compelling attendance. Before that they had had the precarious existence that attends efforts of individuals independent of the State and lacking power to enforce compliance with their rules. Some had been so successful that the State, seeing how well suited they were to extend useful knowledge, adopted them into the state system. At first they found both opposition and favour. Parents and children opposed them bitterly, the former because they had been wont to do what they pleased with their children after they left school at fourteen years of age, the latter because they were kept for two years longer under restraints that had already grown irksome. Even the towns and communities complained, believing the results would not be worth the expenditure. Petition after petition went up to Dresden begging the government to abolish them. These were

not only refused, but the importance of such schools was pointed out to the petitioners, until they too became convinced. In 1881 a new plan or course of studies was prescribed for these schools which proved very successful. In recent years advocates of the schools are asking to have branch schools opened to girls. Hitherto they have been mostly for boys.

“From the annual report for 1897 it will be seen that with a population of 3,783,014, Saxony had 1,953 of these supplementary schools, with 75,358 boys and 1,699 girls in attendance. Besides these, there were 39 industrial schools, with 10,660 scholars; 112 industrial technical schools, with 10,119 scholars; 44 commercial schools, with 4,781 scholars; 11 agricultural schools, with 691 scholars; 7 schools for all kinds of work for girls, with 1,596 scholars, and 18 technical schools for girls, with 2,445 scholars, or a total of 2,184 advanced special schools, with 107,349 scholars. Approximately, to every 1,743 inhabitants Saxony had one such school. The best results were recorded in those schools where scholars were arranged in classes and where instruction was followed by practical work in the trade or calling followed by the pupil. This has been possible in all the larger towns, villages, and cities. In order to help the small so-called home industries to compete with the big capitalists, a large number of industrial, industrial-art, and technical schools have been established and provided with suitable buildings. These have had State aid and assistance from industrial unions, town governments, and societies.

“Besides these schools, the State has supported others for helping handworkers and industrial labourers. The technical schools that aid industrial labourers to continue or to complete their theoretical, technical, and artistic education have often helped to

increase and advance the cities in which they are situated. From 1,000 scholars in such schools in 1874 the number has gone up to 30,335. Proud, too, is Saxony of her agricultural schools. They have helped beyond what their most sanguine advocates believed possible. Important information, gained only after years of hard labour on the farm, is put before boys just out of the common school in such practical form as to fix itself in their memories forever. The profitable progress of farming, not only in Saxony, but all over the Empire, bears eloquent witness to the wisdom of these schools. In 1897 Saxony had eight agricultural schools, with 565 scholars. Of the forty-four commercial schools, four have high-school branches, opened in the middle of this century, and Saxony's wonderful wealth, her industrial greatness, and the fact that she sends out to other parts of the world millions upon millions of dollars' worth of all kinds of merchandise, toys, textiles, tools, and machines is a proof of their excellence. The diversity of her products is limited only by the demands of markets. To England alone in 1896 she sent textiles amounting to \$25,000,000. To us she sends as much, or nearly so.

“Of the thirty-four commercial apprentice schools established and supported by merchant corporations, twenty were established during the last twenty-five years. It is a mistake to say Germany's industrial, industrial-art, and technical school system is old. No part of it antedates one hundred years. Under the ægis of its far-reaching system of education, especially of such special schools as have been mentioned, its support of all that aids or advances the intelligence and well being of its industrial and labouring classes, its industrial-art, commerce and transportation, Saxony cherishes the hope that its good name, as the

nursery of art, industry, commerce, manufactures, etc., will continue to grow in the coming as in the past years.

“I may still further supplement all the foregoing by pointing out more particularly what purposes the supplementary schools are intended to serve. Parties in politico-economic circles here found that the system of common-school education under which boys and girls were given an ordinary education in reading, writing, arithmetic, etc., up to their fourteenth year, was inadequate, partly if not wholly, to the ends aimed at in such a system. To supply this defect it was urged, and finally proposed and favourably acted upon, that graduates of the common schools, boys especially, in some few cases girls, too, should continue to get instruction a certain number of hours a week. This was made compulsory. Manufacturers, shopkeepers, and mechanics in whose employ such boys were found, and not the parents, were made responsible for the boys’ attendance. In these schools, as indicated in the foregoing, the boys get as good an idea as possible of the trade or branch of business in which they are employed. As a rule, the hours of attendance are early in the morning or a certain number of afternoons in the week. Sunday mornings are not thought too sacred for this work. It seems to be an acknowledgment that the years hitherto given to a boy in which to get an education, viz., from his sixth to his fourteenth year, are not enough to prepare him for the struggle for life that he has to enter upon. Men have told me, successful merchants and agents here, that they owe more to the hours spent in the developing or supplementary schools, from the practical character of the instruction given and the information imparted, than to the many years spent in the common schools. While

one is hardly willing to believe this, there can be no doubt of the good work done and being done by the schools referred to.

“MONAGHAN, *United States Consul.*

“CHEMNITZ, SAXONY, *August 31, 1898.*”

Dr. Bertram, the City School Inspector of Berlin, being asked, “What is the result of the various trade and other special schools of your city?” says:

“I cannot as yet give utterance to a definite opinion concerning the results, because this extensive system of industrial education has not existed long enough to have developed fruit, but I may confidently state, without apprehension of saying too much, that with the opportunities that were offered the eagerness to learn increased extraordinarily, which is a most hopeful indication of wholesome influence. I observe, secondly, that the opposition against trade schools, which used to be very strong among the masters, has almost died out, and that, thirdly, the usefulness of apprentices in workshops and factories is being recognised all over the city, because they can apply in actual work that which they learn theoretically in school.”

The real value of a system of schools cannot be estimated until its graduates have had time to prove to the world what they have learned, and how successfully they can apply their knowledge. That requires more time than many impatient people will concede.

The authorities in Berlin entertain the hope that the further development of the system of city trade schools will aid the trades in one particular, to wit: the school teaches the construction and use of machines used in trades, and acquaints the student with various motors, which will gradually lead to an ex-

tension of the tradesman's business. The present extensive system of electrical motors enables a poor man to use mechanical power in his shop, and thus to compete with his wealthy rival. A connection between workshop and factory is established or made possible, since the factory owner will, it is evident, prefer men who have learned in actual contact with machines how to perform skilful manipulations. And whenever new inventions change the aspect of any trade, the men skilled in numerous phases of their work are apt to find occasion for their talents, while those who only understand the mechanical part are easily stranded.

CHAPTER XX.

MANUAL TRAINING.

THE nineteenth century has produced the pedagogical idea of an harmonious all-sided development of the human powers or talents. Mere mental training, or exclusive religious training, or mere social polish, or all three of them together, are no longer considered complete education. Manual skill, or dexterity of the hand in the use of tools, has been included in the conception of a good education. An ever-increasing, fierce competition in the industrial and commercial world, and the vital changes in the mechanical motive powers, have raised the value of skill in the use of tools and familiarity with mechanical contrivances. The old idea that memorising meant learning or knowing, is not tenable any longer. To-day it is to observe, investigate, and then to apply what has been found in the creation of new forms. This is the process of modern education. Its method it thus pithily crystallised: "See, do, and then tell about it."

Few branches or methods of study have so rapidly been adopted by progressive teachers and enlightened school authorities as manual training.

The germ of the manual training idea was given to the world by Froebel. The first to use manual training in higher classes was the noted school reformer of Finland (in Russia), Uno Cygnæus, rector

of a normal school at Iyvaskylae, on Lake Paijene, Finland. The news of his death was scarcely noticed beyond the confines of Finland. Yet the name of that man deserves to be remembered in every civilised country. Cygnæus was the father of that practical instruction in manual training which is now taking its conquering course through the civilised world, and is being recognised as a regular and legitimate branch of study or occupation in the boys' schools of Finland, Switzerland and other countries.

"Manual training is one of the few good things that are good for everybody. It is good for the rich boy to teach him respect for the dignity of beautiful work. It is good for the poor boy, to increase his facility for handling tools, if tools prove to be the things he must handle for a living afterwards. It is good for the bookish boy, to draw him away from books. But most of all, it is good for the non-bookish boy, in showing him that there is something that he can do well. The boy utterly unable, even if he were studious, to keep up in book-knowledge with the brighter boys, becomes discouraged, dull and moody. Let him go to the workroom for an hour, and find that he can make a box, or plane a rough piece of board as well as a brighter scholar—nay, very likely better than his brighter neighbour—and you have given him an impulse of self-respect that is of untold benefit to him when he goes back to his studies. He will be a brighter and a better boy for finding out something that he can do well."*

"Technical education in the strict sense has become a necessity for two reasons. The old apprenticeship has broken down partly by reason of the changed conditions of industrial life, and partly because trades have ceased to be 'crafts,' the traditional secrets

** Detroit Free Press.*

whereof the masters handed down to their apprentices. Invention is constantly changing the face of our industries, so that 'use and wont,' 'rule of thumb,' and the like, are gradually losing their importance, while that knowledge of principles which alone can deal successfully with changed conditions is becoming more and more valuable. Socially the 'master' of four or five apprentices is disappearing in favour of the 'employer' of forty, or four hundred, or four thousand 'hands' and the odds and ends of technical knowledge, formerly picked up in a shop, are not, and cannot be supplied in a factory. The instruction formerly given by the master must, therefore, be more than replaced by the systematic teaching of technical schools."*

"I cannot look at education in its broadest sense without seeing that industrial education exists, and must exist, in all countries as a matter of apprenticeship, and that it can be made a very much more useful thing by putting some portion of it into the form of a school, and having it managed by a competent teacher. Apprenticeship is usually a very poor kind of teaching—extravagantly wasteful of the pupil's time and energy. Thus it happens that the schools have on their hands, at the present time, the duty of providing some plan by which school training shall take the place of all forms of apprenticeship, and besides this the more imperative duty of educating all the people in such general studies as give versatility and the ability to pass easily from one trade or occupation to another. The ability to readjust one's vocation is what is most needed." †

From the following resolutions it may be seen that German teachers are waking up also, to the import-

* *Prof. Huxley.*

† *Dr. W. P. Harris, U. S. Commissioner of Education.*

ance of manual training as a legitimate branch of study in the common school.

The eighth meeting of the German National Teachers' Union, held in Berlin in 1892, was notable for its departmental meeting devoted to the question of manual training. Mr. Groppler read a paper which discussed the following themes: (1) Among the duties modern education has to perform, the development of a creative and formative activity, by means of methodical training of hand and eyes, and the awakening of practical talents in the child, are among the most prominent and imperative. (2) This meeting looks upon manual training which follows educational principles, as a suitable means to reach the purpose set forth under (1). It thinks that manual training is a necessary addition to the customary educational methods. Hence, all steps taken to promote the spread of manual training among the young, deserve benevolent and active co-operation of teachers. (3) The way which the German Society for Manual Training has adopted to promote manual training, i.e., to develop this branch by means of private, communal and society support, is considered the best, partly because it is in accord with the spirit of the times, and partly because it offers opportunity to settle the question whether a general introduction of manual training into the common schools is wanted.

The thirtieth annual meeting of the General German Teachers' Association, held in Leipzig in 1893, adopted the following theses: (1) Manual training promotes school education by training the pupil in diligence, economy, cleanliness and order. (2) It deepens the influence of the school, because it trains in the same manner though in a different way, in which writing and drawing train hand and eye, or

in which nature-study trains the sense of observation, or arithmetic and geometry awaken the concepts of number and space, or gymnastics develop bodily dexterity and force of will. (3) Manual training supplements school instruction, because it places empirical experience side by side with theoretical knowledge, and hence it naturally aids the growth of practical intelligence. (4) It is able to serve school instruction directly, because it appeals to sense-perception, and represents empirically the ideas gained in study; but chiefly, because it enables the pupil to make the means of exemplification, the desirable, simple apparatus with his own hand.

The Teachers' Association of Memelgau, in Germany, occupied several meetings recently with a discussion of the question and came to the following result: (1) It cannot be denied that the movement in favour of manual training for boys and domestic work for girls, is justified, first, because the training in hand-labour is part and parcel of an harmonious development of the human being; second, because it is well adapted to develop the self-activity inborn in man; third, because it is an admirable means of education of the intellect; fourth, because it aids boys in preparing for future occupations in trade and industry, and the girls in domestic work.

It is remarkable to see how like an avalanche the idea of manual training has grown in France and in the United States. Entire cities have introduced the workshop into the common schools. The school authorities of most cities, however, think it just to offer the girls something in lieu of manual training, which as a matter of evidence is reserved for the boys. Cooking schools and so-called schools of domestic science are established for girls. In Europe as well as in America such schools are quite numerous.

Naturally, the method of training in manual skill in one country differs from that in another. There is an essential difference between the German and the French methods. In Paris, for instance, skill in the use of tools for the purpose of entering trades, seems the end and aim. In Germany, notably in Leipsic, manual training is part and parcel of an harmonious all-sided education, which aims alike at intellectual growth, increase of will power and skill in the use of hands and tools. This difference is the principal one, but it is also a difference in principle. The French motive power is utilitarianism; that of the Germans and Americans is, as Froebel has it, "To make men—whole, complete men—men who can observe, learn by experience and act up to their convictions."

The statistics of manual training so far as available are fragmentary, for the simple reason, that school statistics chiefly deal with institutions and systems of schools. Manual training is, however, only one of the branches of study within the school. One statement can be made definitely; that in the three northern states, Sweden, Norway and Denmark, manual training is found almost everywhere in the lower schools. In France it is found only in large cities. In Germany only in a few large cities, and there mostly connected with secondary schools. One feature in Germany is significant: there is a normal school for manual training teachers in Leipsic, as there is also in Naärs, Sweden.

In 1899, Germany had 861 manual training schools in 605 cities, with 1,514 workshops. In 836 of these schools the training is given for purely pedagogical purposes; the other 25 attempt to prepare boys for industrial occupations. The 1,514 workshops comprise 286 independent shops, 238 are connected with

public, mostly high schools, the other 990 are found in private schools and asylums. In the 861 manual training schools the boys of 527 are working in cardboard and other light substances, 336 use the carpenter's bench, 68 do woodcarving, 77 do preparatory roughing-out work, 35 metal work, 28 do country timbering, 11 turning and 11 modelling in clay. The normal school for manual training in Leipsic and a few similar institutions have had 2,200 graduates in the last 20 years. And since the Germans never introduce a branch of study, or establish a new kind of educational institution, unless they have the properly prepared teaching force for it, it is reasonable to suppose, that it will take a long time before manual training becomes an integral part of the course of study of the public schools.

CHAPTER XXI.

INSTRUCTION IN AGRICULTURE.

Historical Review.—It is essential to point out a particular difference between the schools of monarchical Germany and republican countries. New ideas, new needs, new currents of thought or action appeal in France, as well as in America, directly to the common schools, while in Germany the minister of education holds his protecting hand over these schools, and points out to the reformers, that new things and new methods may first prove their power to live by being applied in private, continuation and supplementary, technical, professional, industrial and agricultural schools. These are all schools which take the pupils after they have gone through the elementary schools, i.e., after the fourteenth year of age. Hence we find no specific agricultural instruction in elementary schools in Germany, though we find physics, natural history, and not infrequently gardening taught in the upper grades of the elementary or people's school.

The Dominion of Canada deserves to be mentioned with credit for what is done in it for agricultural education. The Christian Brothers, a Catholic body, maintains a number of schools in which agriculture is taught with great success. These Brothers have published a text-book of agriculture, in the French

language, which gives in detail the lessons prescribed by the French government for the same study.

In the United States, agriculture as a school study is only found in so-called agricultural colleges for which State Legislatures and the Federal Government offer support. Enormous land grants have been made for these colleges, but they are all either secondary or higher institutions. For elementary agricultural instruction little or nothing is done.

Other countries, like Belgium, Denmark, Switzerland, and a few others, foster agricultural education, but little if any official information has been published on the subject. Statistics are particularly meagre. There is certainly no general statement concerning attendance and cost of instruction available, except for a few small states, such as Saxony, Württemberg and others. They will be found in connection with school statistics of those countries.

As the mode of conducting agriculture becomes more and more complicated through the use of American machinery and the application of chemistry to soil formation instruction in agriculture becomes in consequence more necessary.

Germany, in its systematic manner of doing things, has a number of very excellent agricultural colleges of university rank, and others connected with universities; some are connected with mining and forestry schools. A complete list of all the higher institutions in Europe for agriculture, mining, and forestry is found in the chapter on the "Universities of the World."

The higher agricultural schools in Europe seem to be disinclined to accept for admission, any students who come from secondary agricultural schools, but they insist upon the same preparation required for universities and technological institutions. This

policy also prevails in other special schools in Central Europe.

It is of more than passing interest to compare the subjoined courses of study for lessons in agriculture in German and French rural schools.

A memorial presented to the Prussian Diet by the royal department of agriculture, in January, 1897, shows that in Prussia not much is done in preparing the rural population for their vocation, certainly not as much as is done in preparing artisans in cities. The industrial schools far outnumber the agricultural schools. The authors of the memorial say, that the number of boys from fourteen to eighteen years of age in rural districts of the kingdom is 828,000, but the number of students in agricultural continuation or supplementary schools is only 13,317, while that of industrial and technical and trade schools is over 200,000. The department asks for more liberal appropriations for agricultural schools, and submits a course of study for such schools of an elementary grade, which course has been in successful operation in the school at Rybnik. It contains only the technical studies, besides which the ordinary school branches are taught with application to the conditions of rural life.

COURSE OF STUDY FOR AGRICULTURAL EVENING SCHOOLS.

Natural Science and Agriculture—First Winter.

I. Physics.—General properties of matter. Attraction, gravitation. Sources of heat and its carriers. Thermometer. Processes of water: Melting, steaming, boiling, fog, dew, rain, ice. Circulation of water. Phenomena of heat in the atmosphere.

II. Chemistry.—The most important inorganic compounds. (1) Oxygen and some of its simple compounds, carbonic, sulphuric, phosphoric, silicic acids; (2) nitrogen and atmosphere, ammonia and nitric acid; (3) hydrogen, the water; (4) kalium, natrium, magnesia, calcium, aluminium, iron, and important compounds. In close connection with the foregoing:

III. Mineralogy and knowledge of soils.

IV. Knowledge of fertilising.

V. Agricultural Botany.—Useful and injurious plants; plants for cultivation; meadow plants; how to treat the meadow. Weeds and their destruction. Importance of forests. External and internal form of plant parts; propagation by means of buds or seeds; conditions of germination and growth. Nutrition of plants.

VI. Drainage.—Rational treatment of the soil. Sowing, tending and harvesting of crops of importance, including products of the truck farm.

Natural Science and Agriculture—Second Winter.

I. Chemistry.—(1) The most important organic compounds: Starch, sugar, fat, albuminous matter; (2) in close connection with this their relations to the dairy; (3) nutrition, circulation of the blood, respiration.

II. Physics.—(1) Levers, inclined planes, pulleys, specific weight, atmospheric pressure, barometer, pumps, syringe, fire engine, siphon. In close connection with the foregoing, (2) all the tools and machines used on a small farm. A little of their development and improvement.

III. Zoology and Cattle-Raising.—(1) Useful and injurious animals, birds and insects. Skeletons and

other anatomical details. (2) Most important breeds of domestic animals; their teeth. (3) Cattle-raising. How to keep and nurse them. (4) Feeding domestic animals, especially the young.

IV. Economy.—How soil, capital, and labour work together. Relation of grain and fodder raising. Proper rotation of crops. Co-operative and insurance associations.

The work outlined in this sketch is done either by travelling teachers engaged for the purpose, or by the local teachers who have received the proper training in the normal schools.

The French minister of public instruction and fine arts published in the *Bulletin Administratif* of January 2, 1897, the following guide for the instruction in agriculture and in rural schools:

Plan of Study.

The official circulars of October 24 and November 30, 1895, briefly outline a plan of study in the form of a practical guide, designed for the help of teachers in the elementary instruction of agriculture, which subject is now compulsory (by the laws of June 16, 1897, article 10, and March 28, 1882, article 1). This plan is no more than a general sketch; nevertheless, teachers find in it important directions, which should be followed by adapting the suggestions to their pupils and applying them to the local conditions of the district in which their school is situated.

Pedagogical Directions.

Elementary instruction in agriculture should be

addressed less to the memory than to the intelligence of the children; it should be based on the observation of daily facts in country life and on simple experiments, applying material resources at hand, and designed to prove the scientific fundamental ideas of the most important agricultural operations. Children in rural schools should learn, above all things else, the reason of these operations, with an explanation of the accompanying phenomena, and not the details of the method of effects; still less, a list of precepts, definitions, or agricultural recipes. The first things for every agriculturist to learn, things that must be learned by the experimental method, are the conditions essential for the growth of garden vegetables, the reasons for habitual work in common farming, and the rules of hygiene governing man and domestic animals.

No matter how well arranged a manual may be, a teacher would pursue a wrong course in the instruction of agriculture, if he were to require his pupils to study and recite from the text-book. It is positively necessary to instruct from simple experiment, and above all by observation. It is only by placing phenomena directly before them for observation, that children can be taught to observe and fix in their minds the fundamental ideas on which modern agricultural science rests; children in the country are dependent upon schools for these ideas. It is useless to teach pupils what their fathers know better than the teacher, and what they are sure to learn by their own practical experience.

Schools should confine themselves to preparing children for an intelligent apprenticeship in the calling that will yield them a livelihood, and to cultivating in them a taste for their future profession. A teacher should never forget, that the best way to make a

workman love his work is to make him understand it. The end to be attained by elementary instruction in agriculture is to give the greatest number of children in rural districts the knowledge indispensable for reading a book on modern agriculture, or attending an agricultural meeting with profit; to inspire them with the love of country life and the desire not to change it for the city or manufactories, and to inculcate the truth that the agricultural profession, the most independent of all, is more remunerative than many others for industrious, intelligent, and well-instructed followers.

Distribution of Time.

The end defined would be with difficulty attained were only that time devoted to agriculture which is especially reserved for it by the rules; in other words, were other subjects not studied correlatively in preparing children for their future life. In the country especially, teachers should adapt general education to the daily needs of the local population, giving the reading matter, language, and arithmetic a touch of agricultural knowledge. Pastoral poetry, occupations of rural life, problems in the form of simple accounts, and referring to the cost of commodities bought and sold in the neighbourhood, and to the mixtures and proportions of food of cattle, etc., are often valuable aids in the lessons on agriculture, as shown in the division of time per week.

The organised official method specifies general conditions for a division of exercises in elementary schools. According to the plan of study proposed, "two to three hours a week at least must be devoted to the physical and natural sciences (with their applications) studied at first under the form of object

lessons and continued in a regular methodic course later on."

The prescribed regulations do not distinguish between the sciences on the one hand and agriculture on the other; for instance, it is not necessary, during the whole year, to reserve one of the two hours for the sciences, and the rest of the time for agriculture. The distribution of subjects on the dual programme published in connection with the official method should be arranged with respect to the facilities for demonstration offered by the seasons and the weather. All that relates to vegetable life and development (processes in the course of demonstration in garden and field, out-of-door lessons in agriculture) should be reserved for the spring and summer; that is to say, should be included in the programme of study for the second semester; the rest belongs to the winter semester.

The division of exercises referred to accords with this condition, at the same time preserving a logical and methodic connection. If the first ideas of elementary science are properly presented, and can be depended upon as the foundation of agricultural and horticultural ideas, and for the first principles of hygiene, the two or three hours allotted a week will suffice for the rational application of the programme under the condition of not advancing these ideas beyond the pupil's comprehension. In obedience to the law, most of the departmental councils have arranged special programmes of instruction in agriculture for the school of the respective department (province). Exaggeration is a fault common to nearly all of them.

We must not fail in a just appreciation of the character of elementary instruction; strictly speaking, this cannot be professional. All that can be required of teachers in rural schools is to cultivate

the taste for agricultural matters in their pupils, and teach them to understand them as far as their age permits. The general programme in defining a co-ordinate branch of instruction (physics and agriculture) may, without crowding of subjects, include physical and natural sciences, agriculture, hygiene, and domestic economy for girls, studies that should co-relate and mutually supplement one another.

CHAPTER XXII.

COMMERCIAL EDUCATION IN EUROPE.

*Germany, Austria, England, Switzerland, France,
Belgium and Italy.*

EUROPEAN, especially German-speaking nations are making great efforts in preparing young men and women for skilled labour, art and technical pursuits, in order successfully to compete with other nations in building up a remunerative industry, and in gaining the markets of the world for their products. Naturally the commercial schools receive special attention. Statistics of such institutions are meagre. Suffice it to say, that Germany had 247 commercial schools in 1896, many of which were of a secondary or advanced nature. The statistics of other countries will be considered in their places.

Commercial education—that is, a special training for young men who intend to devote themselves to commercial pursuits—has a comparatively brief history, and the system, if we may speak of a system, has not reached that degree of perfection which is found in other departments of public education. It may be said to be still in its infancy. The Germans are quite aware of this, and, situated as they are in the centre of Europe, they look about themselves to note what other nations have done and are doing. It is a characteristic feature of the Germans that for

whatever they undertake they prepare a long way ahead. They are not impulsive reformers, but proceed systematically upon the basis of what exists, changing it as times and conditions of life demand. At present the various governments of the twenty-six states that constitute the German Empire are employed in improving and extending their agricultural, industrial, and commercial schools to enable the people to compete with their neighbours in the world's market.

An Englishman, Sir Philip Magnus, expresses himself on this point with felicitous frankness. He says:

"The commissioners tell us that the increasing severity of the competition, both in our home and in neutral markets, is especially noticeable in the case of Germany, and in every quarter of the world the perseverance and enterprise of the Germans are making themselves felt. In the actual production of commodities we have few, if any, advantages over them, and in the knowledge of the markets of the world, the desire to accommodate all local tastes and idiosyncrasies, a determination to obtain a footing wherever they can and the tenacity in retaining it, they appear to be gaining ground upon us.

"This advance of German trade does not appear to be owing to any falling off in the efficiency of the British workmen, but solely to the superior fitness of the Germans, due exclusively to the more systematic training they receive for mercantile pursuits. The commissioners tell us that while in respect to certain classes of products the reputation of our workmanship does not stand as high as it formerly did, those who have had personal experience of the comparative efficiency of labour carried on under the conditions which prevail in England and foreign coun-

tries appear to incline to the view that the English workman, notwithstanding his shorter hours and higher wages, is to be preferred. They further state that in the matter of education we seem to be particularly deficient as compared with some of our foreign competitors, and this remark applies not only to what is called 'technical education,' but to the ordinary commercial education which is required in mercantile houses, and especially the knowledge of foreign languages."

In order to see how it is made possible for German merchants to "storm the foreign markets," it may be well to look at a course of study designed for commercial training. It is a course in vogue in the higher mercantile institutions in Germany and Austria. The branches are those of a one year's course: Foreign languages (English, French, and Italian), political economy, commercial law, commercial geography and statistics, bookkeeping, commercial and political arithmetic, insurance, knowledge of international commerce, and knowledge of merchandise.

"*Knowledge of international commerce*" includes such departments as the origin of the produce exchange; its divisions and organisation; the brokers and their position on the exchange; legitimate commercial transactions on the exchange; and exchange boards of arbitration; the legal regulation of a system of weights and measures; the metric, English, Russian, and Chinese systems of weights and measures with special regard to their position in the world's commerce; the system of weights and measures of the Orient.

The method used to determine quality in the international grain trade; method of determining quality of yarn and silk in international commerce; the systems and standards of money; the transportation of

goods; the railroad fares and freight rates; classification of freight in Austria-Hungary, Germany, and France; international tariff associations; ocean transportation of freight, subdivided into registering, classifying, and measuring ocean vessels; the manifest; the book of cargo and the bill of lading; letter of conveyance; charter party; tonnage; fixing freight rates; the most important steamship companies, their lines and fares; marine freight insurance; the usages in vogue for cash and time sales; the construction of equivalent price tables, and the explanation of the settlement of balances by exports and imports.

Under "*Knowledge of merchandise*," the products of the world's market are considered according to their natural history and physical and chemical characteristics. After being classified their external and internal marks of genuineness and their adulteration and substitutes are considered. After this preparation the entire animal, mineral, and vegetable products are separated into their organic branches and discussed; but certain home articles of export and import are given special attention (groceries, foods, luxuries, drugs, raw materials, manufactures of textile industries, and tanneries), besides inorganic products technically applied (coal, petroleum, and metals).

In addition special instruction on the adulteration of food and its detection is given.

Microscopical tests are thoroughly carried out for determining raw material and manufactures.

It is no wonder that commercial agents thus prepared can go into foreign countries and open up the markets for German goods. They speak to the people in their own tongues, adapt their consignments to the special wishes of the purchasers, with regard to both the quality of the goods and the manner of

their packing, and with tenacity keep open a market where they have once gained a foothold.

Ludwig Fleischner in Budweis, Bohemia, Austria, treats the subject of commercial education in a way which will commend itself to the interested reader. He shows what the people in England, France, Austria, Italy, Belgium, and Switzerland are doing in the preparation of commercial men, and he incidentally offers comparisons which may prove helpful. He says in introducing his survey:

“The immense progress the natural sciences, technology, and transportation have made in recent years has given to the commercial profession an importance which could not be foreseen in former years. More than ever before has it become the merchant’s duty to act as middleman between producer and consumer. In ever-widening circles he has to bring the products of agriculture and industry to their proper markets. By means of increased taxation which commercial enterprises are subject to they support ever more strongly the State in the discharge of its civilising efforts. Direct exchange between producer and consumer has almost wholly ceased, and the percentage of the population devoted to commercial pursuits has increased considerably in every civilised country.

“Moved by these considerations several European governments have of late years bestowed much attention upon commercial training of young men, and the results thus far obtained give assurance that the further development of schools for that purpose will be commensurate with the demands of the times. Hitherto other professions have been aided by the State, through the establishment and liberal support of institutions of all kinds, while the commercial branch, despite its importance for political economy and public welfare, had received no worthy represen-

tation in the educational system of the various European states. Hence it was resolved, as far as available means allowed, to subsidise communities, boards of trade, commercial societies, and other interested bodies which contemplated establishing commercial schools or had done so already."

AUSTRIA.

A brief historic view of the development of the commercial-school system in Austria is not without interest in other countries, where such institutions are struggling to rise to a higher plane of usefulness.

In the year 1769 purely commercial training began in consequence of a "manifesto" of the supreme commercial authority of the Empire, the Board of Trade of Vienna, which document pointed out frankly that the preparation of merchants had heretofore received inadequate attention. In 1770 a State institution for the preparation of merchants was opened under the name "Commercial Academy." It received an annual subsidy of 3,000 florins (about \$1,500). The institution had two grades of one year each, in which arithmetic, ethics, grammar (and rhetoric), geography, calligraphy, drawing, accounting, commercial science, geometry, natural science, double-entry bookkeeping, and French and Italian were taught. Financial difficulties prevented a vigorous development of the school, which, nevertheless, kept alive as a State institution for over thirty years. In 1804 the school was reorganised and classified among the newly established modern high schools (Real-Anstalten, so-called in contradistinction to classical schools), but in 1815 it again assumed a purely commercial character as a department of the new polytechnic institute, the foundation of which had

been suggested, if not demanded, by a sudden development of commerce and industry in Austria soon after the Napoleonic period. The academy afterward admitted only graduates of "Real-Anstalten," whereby the attendance was greatly diminished. In 1865 the institution had to be abandoned, being superseded by the Vienna City Commercial Academy, which had the identical purpose of the former State institution, while the polytechnicum was raised to the rank of a university, with whose aims, equipment, and methods a commercial course was not thought to be in harmony. But as early as 1840 a Johann Geyer had opened a private institution which was imitated in the principal cities of the country. Other commercial schools of lower order, partly founded by stock companies, partly by private enterprise, have since come into existence and proved to be an important factor in the Austrian educational system.

Legislation also has frequently been attempted in the organisation of commercial schools. An important legislative regulation is found in the law of November 20, 1868, for Lower Austria concerning the establishment and maintenance of industrial supplementary schools. According to this law the industrial and commercial schools are subject to the legislature of the crownland, while in other parts of the Austrian Empire they are subject to regulations issued by the minister of public education. A ministerial order of May 14, 1870, refers to the examination of teachers in commercial schools. In February, 1872, an inquiry into the organisation of commercial schools was instituted, resulting in a conference which submitted material for a bill which became law February 23, 1873. This law divides all the secondary commercial schools of Austria into public and private, higher and lower schools. A ministerial order of

May, 1884, changed the regulations concerning the examination of teachers, and another, dated September 25, 1892, refers to teachers in the lower schools. According to these regulations two kinds of commercial schools, to wit, schools of two and of three year courses, were recognised as lower and higher schools, the latter being called commercial academies. A special board for the examination of teachers in commercial schools and academies was appointed for Austria, which board has its seat in Vienna.

By means of these regulations a sharply defined boundary line has been established between the schools of two-year courses and the academies of three-year courses. Special attention is bestowed by the government upon the lower schools, they being much more numerous than the academies. It must be explained, though, that the difference of one year in the length of the course is not the only reason for calling the one kind of schools lower and the other higher institutions, but pupils of thirteen or fourteen years of age may enter a lower school with only elementary preparation, while admission to an academy presupposes graduation from a secondary school; hence the entire course of the three-year institutions is of a higher kind. The minister of education, in recommending the passage of the law of 1892, said:

“To bring about the establishment and extension of the system of schools with a two-years’ course is a necessity, since commercial clerks have not hitherto been prepared professionally to an extent commensurate with the needs of the commercial world. Hence, wherever communities, boards of trade, and commercial societies find suitable occasion for opening such schools, the State should do all in its power to aid them in their laudable efforts.”

The Austrian government has done much in aid-

ing the movement with both advice and material support. The best measure seems to have been the appointment of imperial inspectors for commercial schools, who watch over their pedagogic and didactic development. The same authority undertook the publishing of a series of uniform text-books, and secured an annual appropriation of 68,000 florins (\$34,000) from State funds for the support of commercial schools.

It seems worthy of mention that at present the State is urged strongly by commercial men to establish more higher commercial schools and support them exclusively from State funds. It is argued that the State provides higher industrial, agricultural, forestry, and mining academies for leaders in industry, agriculture, forestry, and mining, while for the mercantile branch no State institution exists. The merchants feel that the education of their assistants is not of such a high order as that of the members of other callings, and they attribute it to the want of institutions of a high order.

In the nature of the case the youngest institutions have still the frailty of infancy, but the tendency of the time and the immense extension of commerce, both inland and international, will strengthen them. A characteristic feature of the commercial institutions of learning in Austria is that they stand upon the solid basis of experience and attempt to meet the just demands of the time. In their organisation, course of study, and training they are practical. They do not consider it a fault, but a virtue, in this period of the division of labour, to eliminate all matters not distinctly mercantile and to bestow their attention chiefly upon languages and commercial sciences; in short, upon subjects which are of import-

ance to our present civilisation and the calling for which these schools are designed.

To complete the survey of Austria it may be stated that in Hungary also new regulations have been issued lately concerning high commercial schools. As in Austria, the authorities in Hungary insist upon graduation from a modern high school (*Real-Anstalt*) as a condition of admission to a commercial academy, and prescribe a three years' course. The languages taught are Hungarian, German, French (or Italian or English). Aside from languages and common branches, the following studies are taught: Knowledge of merchandise, chemical technology, political and commercial arithmetic, counting-house practice, bookkeeping, correspondence, political economy, and commercial law. The authorities which supervise these schools are the crown ministers of commerce and of public instruction. These authorities send deputies to the graduation examinations, and State inspectors appointed by the minister of public instruction visit these schools at intervals.

ENGLAND.

England has for centuries enjoyed the honour of being the foremost commercial country in the world. It is astonishing, therefore, to notice that for commercial training of young men the government in England does less than in any other country. If private enterprise, corporations, and commercial clubs had not taken care of commercial education by establishing appropriate courses in a few secondary schools, primarily founded for other purposes, one would think England had no scholastic commercial training. In this respect Austria, France, and Germany do much more.

A comparison of the English school system with those of the three countries just named will explain this singular deficiency. Before 1833 the government of Great Britain did not concern itself with public education. Since the Middle Ages the principle had prevailed in the British Isles that the State as such had no right to interfere in the educational affairs of the people. Even after several decades of State education, compulsory attendance was left to local option. In the classical land of self-help and self-dependence schools and other educational institutions of the most varied types originate in private initiative, and only within the last generation has legislation changed and the old principle been abandoned.

At the head of those interested in the promotion of commercial training stands the London Chamber of Commerce, in consequence of whose urgent appeals there has been great activity in behalf of commercial education, and a uniform organisation of schools for that purpose has resulted therefrom. A report of Sir John Lubbock proposed, in 1887, a uniform scheme of study for the various commercial courses existing in secondary schools. The London chamber adopted the essential features of Sir John Lubbock's plan by issuing a uniform course of study which, however, the government was unable to adopt, owing to its want of jurisdiction in secondary schools; hence the course had to rely upon the initiative of the various chambers of commerce in the large cities of the kingdom. The support given to it is an indirect one. It consists in this: That the merchants belonging to the chambers of commerce agree to engage as assistants and clerks only those who have had the preparation prescribed in the course mentioned, or at least to give preference to applicants who can prove such a preparation. This course was framed

by a committee of the London Chamber of Commerce and adopted by the chamber December 14, 1887. It consists of a "junior course," designed for boys ten to sixteen years old, and a "senior course," for boys over sixteen. The instruction in the various branches prescribed is to be fashioned to suit the age of the pupil, and the whole time devoted to it must cover a period of six years.

After the sixth school-year the juniors must submit to an examination in the following obligatory studies, and in at least ~~one~~ optional study: (*a*) *Obligatory studies*: English and literature, French (eventually German, Spanish, Italian, or Portuguese), history of the commerce of Great Britain and her colonies, commercial geography, arithmetic, mathematics, bookkeeping, drawing. (*b*) *Optional studies*: Mechanics and hydrostatics, sound, light and heat, electricity and magnetism, organic chemistry, natural history, geometrical drawing, shorthand writing, and Latin. Having passed the examination, the pupil receives a "junior commercial certificate." For pupils of only elementary preparation an examination is held at the close of the third year, which entitles them, if successful, to a "certificate of elementary commercial training."

For the senior course the following obligatory branches are proposed: Foreign languages, that is, two of the following: French, German, Spanish, Portuguese, Italian, and Latin; mathematics, including higher commercial arithmetic and geometry; commercial geography; universal and commercial history; political economy and banking; insurance; commercial and factory laws; drawing and photography; natural sciences,—to wit, chemistry, physics, mechanics, mineralogy and petrography, metallurgy, botany, zoology, and the use of the microscope; practical exer-

cises in the laboratory. For this senior course, also, an examination is provided, after which a "higher commercial certificate" is granted. For this examination the following studies are obligatory: Two foreign languages, English and literature, mathematics, commercial history, and geography.

Owing to the omission from this course of studies, of branches absolutely essential for thorough commercial preparation, the plan did not remain without serious opposition on the part of prominent experts. During the general meeting of members of chambers of commerce in 1887, the representatives of the Bristol chamber said that not only prominent school men had denounced the plan of study, but very few chambers, despite their formal approval, had felt impelled to establish commercial schools on the proposed basis. The chambers of Manchester and Edinburgh recently worked out kindred courses of study, which they fashioned after German and French models, with this essential difference, that the courses are intended for both boys and girls.

General approval has been given by people interested in the subject to the emphasis with which the importance for future English merchants of a facility in foreign languages was urged. It was said that English merchants, above all other things, need to learn foreign languages, and he who knows the peculiar condition of English education will agree that the ignorance of foreign tongues in England is widespread. In Austria and Germany foreign tongues have been the most prominent feature of commercial training.

Of the London schools which adopted the scheme proposed by the chamber of commerce may be mentioned the famous King's College. The institution arranged not only a "senior course" for boys over

fifteen years of age in evening classes, but also a day-class department preparatory to the evening commercial course. This department prepares merchants' clerks for civil service, and other occupations or professions. In this department the chief attention is paid to the study of German and French. The prospectus of King's College says:

"The special subjects of study in this division are French and German, which are taught colloquially as well as grammatically, and include commercial correspondence. If desired, Spanish and Italian are taught as subjects of private tuition."

The other branches taught in this department are: Commercial geography and history, arithmetic, book-keeping, calligraphy, drawing, and shorthand writing. Lessons in religion are given to every student, unless the parents request that they be dispensed with. Another important London school, having its own commercial department, is the Royal Polytechnic Institute, which prepares its students for the acquisition of a "chamber of commerce certificate," and likewise acts as a normal school for commercial teachers. Special mention should be given the secondary school established in 1866 by the "Corporation for Middle Class Education." This school is located in Cooper street, City Road. It has become one of the foremost public high schools of London under the skilful guidance of its principal, Dr. Wormell. According to the explicit order of its founders, the institution has the chief purpose of giving young people who intend to enter upon commercial pursuits a preparation suitable for their future vocation. It intends not only to give them suitable instruction, but also "train them in those habits and views which will secure for them the best and most lasting success in their future positions." The programme of this school includes

English and its literature, history and commercial geography, mathematics, calligraphy, bookkeeping, chemistry, drawing, French, vocal music, and the elements of natural science. German is an optional study.

As has been stated before, the first step toward a systematic teaching of commercial branches was taken by the London Chamber of Commerce by proposing a model course which unfortunately proved inadequate. But this influential body intends to go further and establish, on a large scale, a commercial college of six grades, in case its new proposition finds general approbation, and it is confidently expected that this institution will find many imitators and lead to other establishments all over England. Already the consciousness of inadequate commercial training among the English merchants has led to changing purely classical secondary schools into commercial colleges. An example of this is the "City of London School." This institution, founded by the city authorities as a kind of classical high school, did not find the desired support among the people, and it was soon found desirable to add a technical course in which foreign languages, bookkeeping, political economy, and shorthand writing were prominent features. From the annual report of the principal, Mr. Pollard, it is seen that this technical course has constantly increased the number of students, while the classical course has decreased to small dimensions. The trustees and faculty of the school are contemplating a radical change by abandoning the classical and substituting a commercial department. Such facts as these indicate the drift of sentiment.

SWITZERLAND.

The third country in which commercial training

has become an object of great solicitude is Switzerland. An animated discussion has been going on there for the purpose of elevating the commercial training of Swiss young men. During the proceedings of the convention, called for a revision of the Federal constitution, which held its sessions from 1871 till 1874, it was pointed out by prominent writers and speakers that professional commercial education should be made a Federal concern. An article was inserted in the constitution, according to which the Federal government was granted the right "to establish higher institutions of learning and to subsidise those already in existence, except the universities, which shall remain exclusively cantonal institutions." However, since the adoption of the constitution this right has not been exercised for the benefit of the mercantile calling, though a Federal polytechnicum has been established in Zurich. Whenever in Switzerland a school question comes up, several factors are to be considered—the Federal and Cantonal governments, communal authorities, chartered corporations, and private enterprise. All these elements had been set in motion to aid commercial education, but without any noticeable effect.

Several private commercial schools had been opened, which were inadequate to meet the highest demands. The Federal Council, urged by numerous petitions of commercial clubs and schools, went further than it originally intended. It contemplated the establishment of a central Federal commercial school on a grand scale. When, however, the plan was submitted to judicial authority it was decided that a school with such narrow professional aims would not be in harmony with the intentions of the framers of the constitution, but that the establishment of a central Federal school for "Swiss law and

science of government" might be within the constitutional limitations, since its purpose was general and benefited all classes of society. In such a school the merchants might find information on questions concerning them.

The plan of establishing a central institution of the highest grade for merchants in Switzerland is held in abeyance for the present, and the attention of men interested in the subject is concentrated on the improvement of commercial schools subsidised by the Federal government and of private institutions. The Federal Council, April 25, 1891, passed a resolution which regulates the relation of the State to commercial institutions, the four articles of which read as follows:

"ARTICLE 1. To the institutions of learning which, according to the law of June 27, 1884, are entitled to Federal aid are added the commercial schools, and hence the regulations concerning other schools will be applicable to them also.

"ARTICLE 2. The executive authority is hereby empowered to grant subsidies to commercial clubs for maintaining schools, and to grant scholarships to students for meritorious work and excellent results achieved in Swiss commercial schools, as well as to grant stipends to Swiss graduates of such schools for the purpose of attending foreign higher commercial institutions.

"ARTICLE 3. Minute regulations for carrying out this order are to be published by the executive, similar to those in force for other callings.

"ARTICLE 4. The sum of 60,000 francs (\$12,000) is hereby appropriated for this purpose for the year 1891."

After this brief historical review, it may be stated that the development of commercial education in

Switzerland took essentially the same course which it took in England. About forty years ago commercial departments were added to cantonal, city or private high and industrial schools. The typical form in which these secondary schools appear is that of a uniform course, which, after three or four years, is bifurcated into technical and mercantile divisions. Side by side with these general secondary schools a few independent commercial schools are found. These have a two-years' course.

A few schools have become typical, i.e., those of Berne, Basle, and Geneva. The commercial school of Berne is a department of the city high school. Although a city institution, it receives aid from the cantonal government. It is a classical high school, bifurcated in the higher grades. The course is uniform for all students from the tenth to the fifteenth year of age; after that the commercial department continues for two years. The uniform course contains French and English, so that the students come into the commercial course with a good linguistic training. In the latter course the studies are as follows: Physics, chemistry, knowledge of merchandise, drawing, calligraphy, gymnastics, science of trade, history, geography, counting-house work and book-keeping, mathematics, commercial arithmetic, German, and religion. The total number of hours of instruction per week is thirty-seven in the first, thirty-six in the second year. The entire institution is governed by a board of trustees of nine members, of whom five are appointed by the canton (or State), four by the city. The tuition fee is 60 francs (\$12) per annum. For the second year a number of scholarships are granted.

In Basle also the commercial school is not an independent institution, but a department of the city

high school. Upon a common basis rest the two sections, the technical and the commercial. The former has a course of three and a half years, the commercial one of three years. Both departments are under the same authority and supervision. Tuition is gratuitous, as it is in all city schools of Basle. The course of the commercial department contains the same branches found in the Berne school. The number of hours per week is thirty-one in the first, thirty-two in the second, and thirty-three in the third year.

Until 1887 commercial training in Geneva was given in the commercial department of the cantonal high school, but in that year an independent high school for commercial branches was established by the city, the former institution was abandoned, and the high school reserved for university preparation. The new school requires the candidate for admission to be fifteen years of age. He must have passed through five grades of a college or the second grade of a professional school. For students who cannot comply with these requirements a preparatory department of two years is provided. The tuition fee is 100 francs (\$20) for Swiss students, but double that amount for foreigners. Nonresident students who come to study only a few branches pay 5 and 10 francs (\$1 to \$2) per week. The direction and supervision of this institution lie in the hands of an administrative board of twelve members, four of whom are appointed by the Canton (or State) and eight by the municipal council. The expenses for 1893 amounted to 32,880 francs (\$6,576), of which the Canton of Geneva paid 6,725 francs, the city 20,155 francs; 6,000 francs were paid by the students. The course includes the following branches: French, German, English, Italian, Spanish (the last three languages are optional studies), calligraphy,

drawing, bookkeeping, mathematics, geography, history, physics, chemistry, civil law, insurance and tariffs, knowledge of merchandise. At stated intervals excursions are made to mercantile establishments, after which the students report in class of what they have seen. This leads to discussions on questions of the day. The number of hours a week is thirty-three in the first and second, thirty-four in the third year. The language lessons per week are as follows: French, three; German, four; English, four; Italian, four; Spanish, three. The most prominent branch is counting-house practice, for which eight hours a week throughout the three years are reserved.

Similar independent schools for commercial training are found in Neuenburg, Solothurn, Winterthur, and Chaux-de-Fonds. In addition to these there are in Switzerland eleven commercial departments connected with classical and technical high schools. Commercial instruction of a lower order is offered also in "continuation schools" for elementary pupils, and commercial clubs arrange evening courses for apprentices here and there.

In 1893 the total Federal subsidy for commercial education in Switzerland amounted to 87,490 francs (\$17,498), of which 46,800 francs were spent for commercial schools; 38,640 francs were paid to commercial clubs, and 2,050 francs for scholarships, of which one is used in Venice and two in Munich. In conclusion, it may be stated that the educational authorities of the Canton (or State) of Zurich in 1893 petitioned the Federal government for a subsidy for a girls' commercial school. This petition was not granted, though, because the Federal executive interpreted the law of 1884 as giving no authority to extend commercial training to girls. Similar petitions have been sent to the Federal government from

Berne and Biel. There is, however, little doubt that these petitions will soon be granted, inasmuch as the commercial department of the technical school at Winterthur, which receives a Federal subsidy, admits girls. The local authorities of that city are highly in favour of the extension of the subsidy to schools for both sexes.

FRANCE.

In the year 1820 two French merchants, Messrs. Brodard and Legret, who were anxious about the future of French commerce, conceived the plan of establishing a school in France in which young men should receive instruction preparing them to be merchants. Relying on their own means, they opened such a school in Rue de Grenelle, calling the institution “*École spéciale de commerce.*”

The fitness of such an undertaking would at present be self-evident at a time when the necessity for commercial training is recognised everywhere, but at the time when Messrs. Brodard and Legret opened their school the enterprise was considered a very bold one. Few thought of the necessity or even of the possibility of such a technical instruction for which hitherto practical work in the counting-house and store magazines had fully sufficed. Few believed that the commercial sciences as such could be made subjects of scholastic instruction, owing to the great number of special branches of which these sciences are composed. The establishment of such an institution, for which there was no model in existence in France, met with the greatest obstacles. An attempt had to be made to combine the various commercial branches of knowledge into one science, to find or to prepare suitable teachers for that purpose. Other circumstances added to the difficulty. Frenchmen seemed to have

no decided commercial sense or interest in commerce, although it was then flourishing. France, furthermore, was, after the Napoleonic wars, in a condition which prevented a far-sighted policy with regard to commerce and industry.

All these things combined to prevent young men from attending the school in Rue de Grenelle. They wished to be admitted to the bar, become physicians and authors rather than merchants. Entrance into the mercantile profession seemed a degradation for which no especial scholastic preparation was required. Hence the new school could not expect a flourishing growth. The trustees were well-experienced men, who attempted to frame a study plan suitable for the requirement of commerce. Men like Casimir Périer, J. B. Say, Ch. Dupuy, J. Laffitte, and others framed a plan for this new school, whose course was one of three years. At first some students entered the institution, partly resident Parisians, partly from other parts of France, but after ten years of wrestling with new problems the institution was closed. Several times it had changed directors.

In 1830 Adolph Blanqui undertook to revive the school. He first changed the name of the institution to "*École supérieure de commerce*," which name it has retained to this day. Blanqui may justly be called the organiser of commercial education in France, for to him are due its principles. For twenty-five years he stood at the head of this school, whose reputation spread all over Europe, but the number of its students remained small. After Blanqui's death the institution met many kinds of obstacles, until, in 1869, the Paris Chamber of Commerce took possession of it. Meanwhile several other schools were established in France, mostly in imitation of Blanqui's institution.

The commercial schools of France may be divided into two groups. The first comprises seven higher institutions, of which two are in Paris, five in the provinces. The second group contains four secondary schools, of which three are situated in Paris. Besides these institutions there exist numerous schools of an elementary character for adults of both sexes. Hence there are really only eleven distinctly commercial schools in France. The Superior School of Commerce, the School of Commerce, and the School of Higher Commercial Studies are all under the direction of the Chamber of Commerce of Paris, which undertook the management of the first in 1869, the second in 1872, and the third in 1882. The commercial schools in Lyons, Marseilles, and Havre, as well as the commercial institute in Paris, are maintained by private corporations. The school in Rouen is connected with the school of science and letters of that city; the school in Bordeaux is connected with an industrial school, while the school at Rheims is under the direct supervision of the minister of public instruction. This city has, besides, a school of commercial practice under private management. Most commercial schools in France are managed by a board of trustees called *comité*, usually chosen from among the prominent merchants of the city in which they are situated. In Paris the chamber of commerce elects the trustees from among its members. In the board of trustees of the school of Marseilles two teachers act as expert counsellors, while the higher school of commerce in Paris has a supplementary council of twenty-five members, the French minister of commerce being the chairman.

The State subsidies paid for commercial education are quite large, as will be seen from the following statements: A ministerial decree of February 1,

1849, granted sixteen scholarships of 500 francs (\$100) each. This sum was afterwards greatly increased, and taken from the funds at the disposal of the minister of commerce for the promotion of commerce and industry. In the year 1875, for the first time, a definite amount (equivalent of \$6,000), was appropriated for that purpose, and this amount was increased (to \$8,000) in 1883. The State budget of commerce in 1884 contained \$5,000 for the improvement of a building occupied by commercial schools. This appropriation was increased to \$8,400 in 1886. Annual appropriations were also made for travelling expenses paid to graduates of higher schools of commerce. In 1886, \$3,600 was used for that purpose. This action of the House of Deputies found general approval, since the importance of travelling was recognised for these students; partly, also, because it was shown that other countries had set the example in this policy. A special set of regulations was adopted for the manner of granting these stipends. The minister of commerce is the final judge in the matter.

The courses of study in most French commercial schools are arranged for three years, that of the school in Lyons for four years, while in Bordeaux and Havre only a two years' attendance is required. Foreign students are required to pass through a preparatory department, in which they are expected to familiarise themselves with the French language. The age at which students are admitted is fifteen years; schools which have a preparatory department admit to that at fourteen years.

The following branches are generally found in the French commercial schools: French, algebra, arithmetic, geometry, bookkeeping, commercial law, physics, chemistry, history, commercial geography, draw-

ing, shorthand writing, and two foreign languages. These branches are taught in thirty-one weekly hours. The number of professors varies between nine (in Havre) and thirty-two (in Paris). The teachers' salaries are arranged according to the number of lessons they give per week and the importance of their subjects. A peculiar feature of this is that the professor of law is paid six times the amount which the professor of bookkeeping receives.

In all French commercial schools weekly excursions are arranged to factories and large mercantile establishments, museums, and exhibitions. Since it is impossible to take a large number of students to one place, small groups are conducted by their teachers to various points on the same day. In France the numerous museums, art collections, monuments, and exhibitions are much more frequently utilised as agencies of education than in other countries. Elementary classes are taken by their teachers, on days when school is not in session, to museums and collections, to monuments and statues of noted men, where appropriate instruction is given. It is noteworthy, also, that the French commercial institutions of learning have many foreign students. In the superior school at Paris one-third of all the students are foreigners; the school at Marseilles has about thirty, that of Havre about fifty, foreign students. Diplomas are awarded to successful candidates who pass the final examination; in some of the institutions silver and gold medals are given for meritorious work. The diplomas of the Superior Commercial School, and those of the School for Higher Commercial Studies are signed by the minister of commerce.

A few details about the "École Supérieure de Commerce" in Paris may conclude the review of French commercial education. This institution was

founded in 1820 and transferred to the Chamber of Commerce in 1869. It is now situated at No. 102 Rue Amelot. The prospectus for 1895 says: The course is one of three years, but well-prepared students have the right to enter the second grade at once. The age of admission is fifteen years. The students of the third year are guided by their professors to factories of Paris and vicinity, and report in writing what they have observed. The same students undertake a journey annually into the northern part of France or into Belgium in order to study the coal mines, means of transportation, and other things interesting to merchants. The students' reports of this excursion are submitted for competition; the best composition is awarded a travelling scholarship of 1,000 francs (\$200). Examinations are held every three months, reports of which are sent to the parents. At the close of the course, medals are distributed which are provided by the Chamber of Commerce, the Society for the Promotion of Commercial Geography, and the Society of Alumni. The students who pass the final examination have the right to limit their service in the army to only one year, and the aid of the school is offered to them to secure acceptable positions in the commercial world. The State grants twelve scholarships to worthy students. Like most French schools of this kind, the superior commercial school has dormitories connected with the institution; in this school tuition, room, and board cost \$400 a year, payable in three instalments.

BELGIUM.

At the head of the commercial institutions of learning in Belgium stands the "Institut de Commerce"

at Antwerp. The establishment of this noted institution is due to the former minister of state, M. A. Dechamps, who submitted the plan for such a school to the city council of Antwerp and to the provincial government in 1847. At the same time a merchant, H. Mathysseus, published a pamphlet: "Propositions for the establishment of a Belgian university for commerce and industry." However, public opinion and the existing universities in Belgium opposed this plan, claiming that the science of commerce was not equal in importance to the university studies; hence the minister's plan was finally adopted and the institute of commerce opened with fifty-one students on October 22, 1853. The city council undertook its maintenance and management, and the State guaranteed to pay one-third of the expenses. This school has educated over 4,000 students.

The institute of commerce has an organisation similar to the universities of Belgium, but unlike other schools of that country, it has no dormitories; the students live in private houses. The course is one of two years. An examination is required for admission; exempt from this examination are graduates of the Belgian Athenæum, or any institution of Belgium ranking with this high school. All candidates for admission must prove that they have sufficient familiarity with French, English, and German. For the purpose of obtaining well-prepared students, a preparatory department has been added, in which only those branches are taught which fit the student for admission to the institute. The lowest age at which admission is allowed is sixteen and one-half years. The branches in which the candidates for admission are examined are French, English, German, book-keeping, geography, mathematics, chemistry, physics, history, commercial law, and political economy.

The most important place in the course for the first year of the institute is the practical work in the model counting-house. Here the more theoretical branches have their focus. Here is utilised that which is taught in the scholastic branches. In the counting-house the mercantile practice is imitated in its smallest details and widest bearings. Regular business transactions take place, and every student in turn is made to participate in all kinds of transactions and occupations. Business correspondence is first carried on in French, then in the other languages taught. Every month stock is taken and a balance sheet furnished. During the first year business is done only with European countries; in the second year the business is extended to transmarine countries. All the bearings of trade are taught, so that the students gain a clear view of commerce and its ramifications all over the world.

Besides the regular lessons and lectures, occasional talks are given by prominent merchants, manufacturers, engineers, and other experts on subjects closely connected with mercantile pursuits. On days when the school is not in session, visits to commercial and industrial establishments are made by the classes, conducted by their teachers; but, unlike the commercial schools in Paris, this institution does not arrange for discussions on the part of the students. Lately it has been urgently advocated to add a third year to the course. This third year should be devoted chiefly to the legal aspect of commerce, and should serve as a special preparation for consuls, since in Belgium the consular service is chiefly recruited from among the merchants.

Graduates receive, upon application, travelling stipends which are paid by the State. The legislature or parliament appropriates 45,000 francs, or

\$9,000, annually for that purpose, and the stipends vary between \$1,000 and \$1,200 per annum, according to the country to which the students go. They must agree to stay three years in that country. During recent years the graduates receiving stipends have sojourned in transmarine countries, Argentina, Brazil, China, Japan, India, Australia, and New Zealand. They have established Belgian agencies for commercial firms in these countries, and have opened new channels of trade for Belgian products of industry. Some of these graduates have been appointed Belgian consuls in foreign countries.

For sixteen years the institute in Antwerp struggled for existence, and in 1869 it had only 67 students, of whom 35 were foreigners. Since then the attendance has increased, partly owing to a reduction in the tuition fees, partly owing to the stipends paid to graduates by the State. Belgium, with a population of over five and a half millions, among whom the industrial and commercial people are very numerous, would seem to need more than 80 graduates per annum from the only higher commercial institution the country possesses. The Belgian "Athenæums" or high schools give also commercial instruction to a limited degree, but their graduates rarely devote themselves to commercial pursuits.

ITALY.

The beginnings of commercial training in Italy do not date back many years. The law which organised public instruction was passed in 1859, and in this law an article referring to commercial education determines that those who intend to devote themselves to commercial "as well as any other technical" pursuits, should attend the "Istituti tec-

nici," so called in contradistinction to classical high schools. These institutions have a section for agriculture and technology, and another for commercial studies. Graduation from these institutions enables the students not only to gain good positions in mercantile houses, but entitles them also to certain State offices.

The commercial "sections" or departments in technical high schools offer instruction in bookkeeping, correspondence, knowledge of merchandise, banking and commercial law, and French, while German is an optional study. There are about sixty of such institutions in Italy. They are subsidised by the State, but, according to the verdict of the mercantile world, they are not sufficient to meet the ever-growing demands of the time. A higher institution was needed such as nearly every profession and calling had. The universities prepared for the learned professions; the engineering school at Milan prepared thorough technologists and engineers; the school of shipbuilding at Turin thoroughly prepared shipbuilders; artists had several schools, and the school of design at Genoa prepared young men for industrial arts. Only the merchants had to rely on secondary schools. At last, in 1867, a beginning was made to supply the want.

It was in Venice, the city which had been famous for many centuries for her extensive commerce and successful industry, where higher instruction for commercial men was begun. In July, 1867, the directors of the "Stabilimento tecnico" petitioned the city council for an appropriation with which to establish a higher commercial school. The city council, and other bodies addressed for the same purpose, declared their willingness to aid the institution, since the need of better preparation for merchants was

acutely felt. After an executive committee had been appointed, the Royal government was also asked for a subsidy. This government was willing to contribute annually to the maintenance of such a school if the founders would consent to devote it to three purposes: (1) To offer higher instruction for mercantile pursuits; (2) to give instruction in law for the professional preparation of consuls, and (3) to act as a normal school for teachers of commercial schools, and for that purpose lay especial stress upon the teaching of foreign languages. The government provided further that the board of trustees of the institution should have one member proposed by the government.

In 1871 the institution was opened under the most favourable auspices. The number of students was considerable, and it has since steadily grown. The school is called Royal Higher School of Commerce, and it has five yearly grades. At first a preparatory department was maintained, but that has been found unnecessary and has been abandoned. At present (in 1896) the institution is conducted by Senator Francisco Ferrara. The province of Venice pays a sum equivalent to \$8,000, the city of Venice \$2,000, the board of trade \$2,000, and the Italian government \$6,000 per year for its maintenance.

The school takes regular and irregular students. The latter prepare themselves for particular branches, such as the consular service. Candidates are required to submit to an examination for admission, except those who graduated from technical lyceums (modern high schools). This examination includes the Italian language and literature, geography, history, arithmetic, algebra, physics, natural history, French, and shorthand writing. It is possible for a candidate to enter the second year's course if he is in possession of the required knowledge and has passed his seven-

teenth year of life. The tuition fee amounts to 50 florins (about \$25) per annum. Extraordinary students pay six florins (\$3) per annum for each branch of study they choose. The Royal government, as well as the other agencies which support the school, grant scholarships; the same is done by the boards or chambers of commerce in other cities when they send students to this school in Venice.

In accordance with the expressed desire of the Royal government, the school consists of three departments: (1) The general department, which prepares students for commercial pursuits in a three years' course; (2) the consular department, which has a course of five years, and (3) the commercial normal school, which prepares teachers for commercial schools in a course of four years. In this latter-named department the chief studies in the first year are political economy and statistics; those of the second year are the common commercial branches; those of the third year are knowledge of merchandise and chemistry, and those of the fourth year are foreign languages. With this normal school department a practice school is combined, in which the students learn how to teach the commercial branches. The studies of the other two departments are, aside from the purely commercial studies, commercial history and political history, English, French, Italian, German, and one oriental language, international law, criminal law, constitutional law, court procedure, commercial and maritime law, and in the consular department certain additional branches are taught which are prescribed by the government and refer to consular practice.

The professors are paid between \$600 and \$1,500, and their appointment, dismissal, or promotion has been reserved to the government. At date of last

report (1894) the institution has eighteen professors and two assistants.

The school has the rank of a university, and graduation from it entitles the student to the same rights granted to graduates of State universities. This commercial State institution has rendered very valuable service to Italian commerce. It possesses an extensive museum of merchandise and a large library, for the maintenance and extension of which 1,000 florins (\$500) are used annually. Besides these it has the entire equipment of a first-class commercial school. However, the Italian merchants persist in engaging German clerks in preference to Italian. Still, the school in Venice has found two imitators—one in Genoa and one at Bari. The future of these two institutions seems to have been secured, since, as the reports say, their instruction is purely technical and of a practical character. This is a feature which is generally appreciated by merchants who are not given to theoretical consideration of any question. Anything that is not directly aiding the technical preparation of merchants is excluded from the course of study of these schools.

The modern Kingdom of Italy has done much in the field of education and instruction. It has called into existence establishments which have become famous. In regard to commercial education it has not remained behind other countries. In Turin a commercial school of three grades was founded in 1856. Its founder was a graduate of the Paris "*École Supérieure de Commerce*," Jean Joseph Garnier. Other commercial schools in Italy are of later date. There is one in Florence, established in 1877; one in Genoa, founded in 1883. Other large cities in Italy—for instance, Rome and Naples, in which a certain industrial feature is prominent—have com-

mercial schools supported by private persons, communities, boards of trade, or commercial societies. The school founded and maintained by the society of "Archimedes" in Turin occupies a peculiar position. It is now (1895) fourteen years old, has sixty classes and sixty-four teachers. In 1894-95 it had 1,675 students, male and female, and 1,300 graduated after one year's study. The course of study includes Italian language, arithmetic, bookkeeping, penmanship, French language, drawing, electro-technology, shorthand writing. The girls learn, besides most of the foregoing branches, sewing and embroidery.

The right to attend a common commercial course is obtained by passing an examination before a government commissioner, but if the student wishes to study languages and geography he is obliged to pass an examination for admission to a university. In other words, these two branches, belonging to the university course, are classed among the branches of higher education. For ordinary commercial branches a diploma of graduation from a lyceum is sufficient.

